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THE BRITISH PTERIDOLOGICAL SOCIETY

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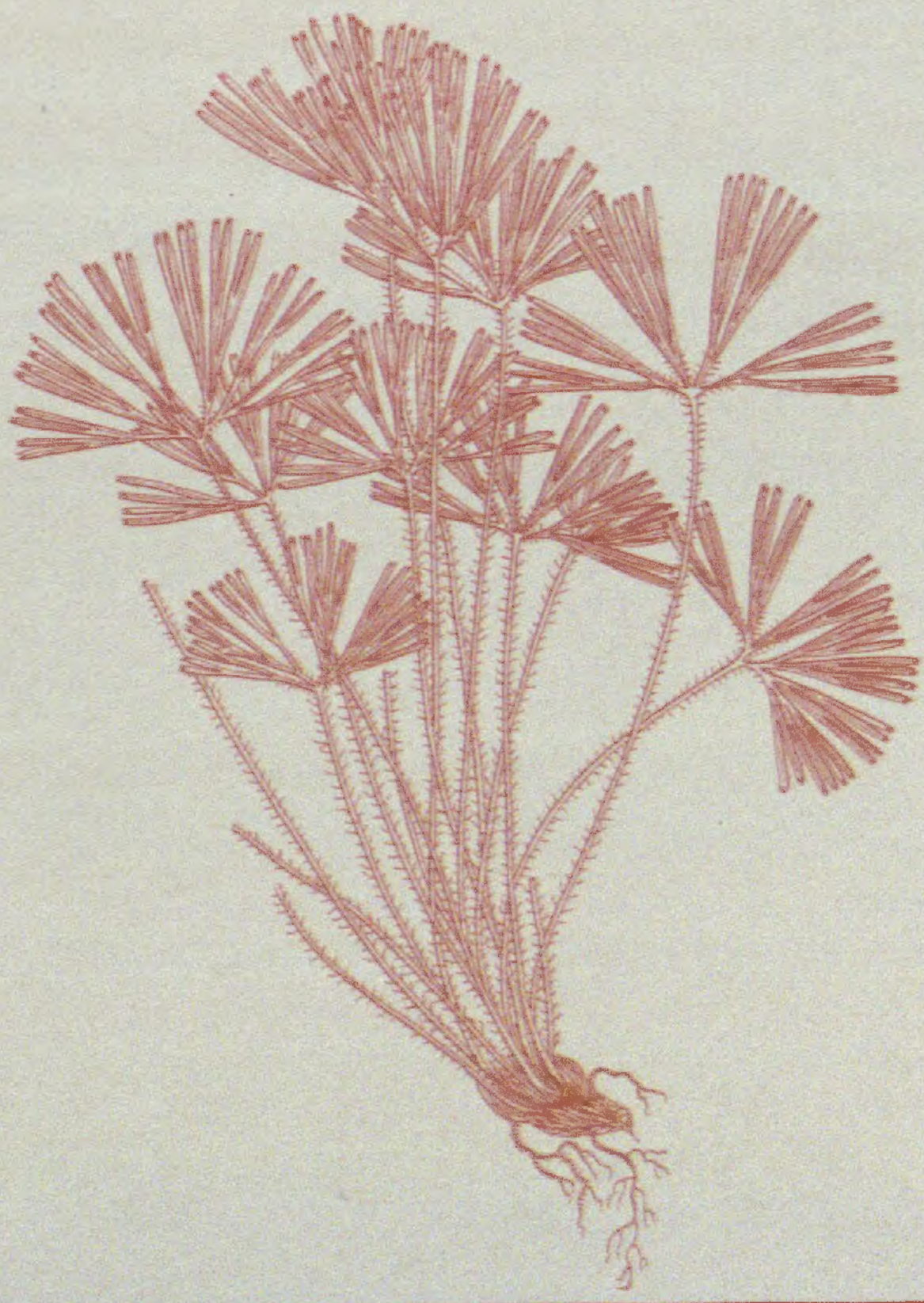

Edited by A.M. Paul

THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and is still a focus for fern enthusiasts, its wide membership including gardeners, nurserymen and botanists, both amateur and professional. It provides a wide range of information about ferns through its publications and website, and also organises indoor and field meetings, garden visits, a plant exchange, a spore exchange and fern book sales. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **Website: www.eBPS.org.uk**

Membership is open to all interested in ferns and lycophytes. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £25, Personal Members not receiving *The Fern Gazette* £21, Student Members £12.50, Subscribing Institutions £42. Family membership in any category is an additional £2.50. **Airmail** postage for all journals is an extra £10, or for those not receiving *The Fern Gazette* £5. Applications for membership should be sent to the Membership Secretary (address above) from whom further details can be obtained. **Standing Order** forms are available from the Membership Secretary and the BPS website.

(**Front cover**: *Actiniopteris radiata*. Illustration from: R.H. Beddome (1864) *The Ferns of Southern India.*)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

THE

BULLETIN

OF THE

BRITISH PTERIDOLOGICAL SOCIETY

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NATIONAL FIELD MEETINGS

SOUTH AFRICA – 18 February – 2 March

Introduction — Jennifer Ide

Twenty-two participants, from England (11), Scotland (2), the USA (7), Mexico (1) and Kenya (1), arrived over three days at the Centurion Lake Hotel in Pretoria. Jolanda and Allan Nel, our tour guides for the next two weeks, had kindly arranged an optional programme for those who arrived early; this was taken up by all. From the beginning it was clear that Jolanda and Allan had put a lot of thought and careful planning into every aspect of the excursion, and we realised that this was going to be an exceptional trip. We were each given a 'goodie bag' containing a map, the itinerary, useful notes and leaflets, a note-book and pen, a small bottle of *Tabard* (the recommended insect repellent for South Africa – anxieties about malaria had obviously been noted) and some sweets.

Saturday 18th February

Elsenbroek's garden, Pretoria, Gauteng Province — Janet Keyes

With hadada (a type of ibis) protesting overhead, the BPS adventurers were welcomed to their first South African garden by the owners, Fred and Tersia Elsenbroek. Located in the Strubenskop, Lynnwood area of Pretoria, this garden was a good introduction to many of the native and introduced plants that we would find throughout our South African travels.

We were immediately struck by the variety, number and size of the cycads lining the drive. Of particular note was a specimen of the very rare *Encephalartos senticosus* (formerly *E. lebomboensis*), which had been rescued by Fred from the rising flood waters of the Jozini Dam that threatened its endangered cliff-side home near the Pongola Game Reserve, KwaZulu-Natal, thus saving it from being permanently lost.

Notable among the ferns in the beautifully laid out garden were two large specimens of the beautiful New Guinea tree fern *Cyathea tomentosissima*, its unusually narrow ultimate pinnule segments giving the fronds a depauperate appearance. Other ferns included the ubiquitous and highly variable *Cheilanthes viridis* var. *viridis*, *Stenochlaena tenuifolia* climbing a tree in the back yard, and a number of *Pteris*, such as *P. cretica* and *P. tremula*, as well as *Adiantum hispidulum*, *Tectaria gemmifera* and *Didymochlaena truncatula*. The front garden also contained South African shrubs and large trees including *Podocarpus falcatus* (Outeniqua yellowwood), and several small pools filled with colourful koi carp. During tea hosted by the Elsenbroeks, the afternoon was 'topped off' with the discovery of a large bowl of *Ophioglossum reticulatum* tucked away under a tree fern near the swimming pool fence!

Allan and Jolanda Nel's garden, Pretoria, Gauteng Province — Pat Riehl

Arriving at the front gate of Allan and Jolanda's garden, you knew immediately that you were entering the world of a true pteridophile. Five cyatheas and two dicksonias lined the

drive-way. The roughly semicircular front garden beds provided privacy from the street and contained *Asplenium aethiopicum*, *A. splendens*, *Blechnum inflexum*, *B. minus*, *Cyrtomium falcatum* and *C. macrophyllum* var. *tukusicola*. There were also many species of *Dryopteris* and *Platycerium* and numerous cultivars of *P. bifurcatum*. There was whimsy too: clay stepping stones looking like cross sections of a tree trunk or impressed with a fern frond.

Alongside the garage were troughs planted with *Adiantum reniforme*, *Anemia dregeana*, *Asplenium pinnatifidum*, *A. capense* and *A. cordatum*, *Brainea insignis* and *Cheilanthes farinosa*. At the back of the house was a hothouse full of more goodies: orchids and tillandsias intermingled with ferns such as *Blechnum tabulare*, *B. patersonii*, *Cyathea capensis*, *Drynaria bonii*, *Huperzia gnidioides*, *Polypodium ensiforme*, *P.* (*Niphidium*) *crassifolium* and *Marginaria* (*Pleopeltis*) *bombycina*. A lathe-house was filled with more surprises. One wall was hung with soil pockets, currently a popular idea in the US, in which grew *Adiantum weigandi*, *Asplenium australasicum*, *Elaphoglossum drakensbergense* and *Pteris multifida*, to name but a few. A small pond was surrounded by *Cyathea dregei*, *Angiopteris evecta*, *Aglaomorpha coronans*, numerous *Microlepia*, *Pteris* and *Polystichum* species, and so much more.

As well as being a good plantswoman, Jolanda is a very accomplished artist and in her home were many fine examples of her work: clay lanterns decorated with fern frond designs, wood sculptures of fronds, and copper impressions.

One could spend many hours in this garden and still not read all the plant tags! (Thank goodness for plant tags!) Not only a plant lovers' garden, this is also a garden of two enthusiastic fern devotees and it shows. It was a treat to see.

Sunday 19th February – Strauss xeric garden, Villa Ferné woodland garden & Fernhaven Nursery, Pretoria, Gauteng Province **Jennifer Ide**

This was a very busy day for the group, now fully gathered. Our first visit was to the attractive garden of Sas and Susan Strauss, dominated by a diversity of drought-tolerant, mainly native, cycads, succulents and ferns, attractively planted amidst landscaped rocks and large pieces of drift wood. Among the ferns, all in splendid condition, my attention was particularly drawn by a variegated *Adiantum aethiopicum*, *A. hispidulum* with its pink young fronds, *Lygodium japonicum* fruiting prolifically, an elegant specimen of *Cheilanthes quadripinnata*, and the climbing *Pyrrosia lingua* with its densely scaly rhizome and abaxial surface of its fronds.

Our next visit was to East Pretoria and the natural looking woodland garden of Villa Ferné and the neighbouring Fernhaven Nursery, both owned by Chris Myburgh. The floor of the woodland was densely planted with a mix of *Blechnum tabulare*, crowns of *Asplenium australasicum* and of young *Cyathea dealbata*, and several species of cycad, all beneath a canopy of mixed native trees, including the intriguing *Bombax ceiba*, one of the kapok-yielding species, with its elegant, tall, soft grey, slender elongated bottle-shaped trunk covered from 'top to toe' with vicious grey spines. The nursery was memorable for its stunning, colourful, mixed displays of ferns, including large specimens of platyceriums, bromeliads, especially the brightly coloured urn-shaped *Aechmea* varieties and tillandsias. The selection of ferns was small, but larger species were chosen, which are useful in landscaped displays.

Rietvlei Reserve, Pretoria, Gauteng Province **Jane Whiteley**

After a delicious lunch, with great South African food and hospitality, generously hosted by the Fern Society of Southern Africa at the Stone Cradle restaurant, Doornkloof, Pretoria, we excitedly piled into the vans and headed off to the nearby Rietvlei Dam and Nature Reserve (25°52′58.4″S, 28°18′31.4″E) for our first glimpse of African wildlife.

Rietvlei, one of the world's largest urban nature reserves, is situated south of Pretoria but within the city limits. The reserve, which had its early origins as farmland, was opened to the public in the late 1940s and today is home to large herds of introduced endemic game species. A system of multi-use roads through its open Bankenveld grassland and hills with indigenous trees offered us a unique opportunity to view our first zebras, blesbuck, eland

and white rhinos, each seeming to have its own white egret sitting on its back, a help in spotting animals at a distance! Three distinct habitats, grassland, open water and wetland, make the reserve an excellent place for bird-watching. Ferns? In a small ravine, several unremarkable ferns were trying hard to survive! But it was the memory of seeing our first wild animals in Africa that we would take with us.

We finished a busy day with a second visit to the Nel's garden for those who had not had the opportunity on Saturday, to the satisfaction of all!

Monday 20th February – De Jager's Garden, Emalahleni (Witbank), Klipkraal Tree Fern Forest & MacMac Falls, Mpumalanga Province **Pat Acock**

Peggy de Jager who, in the absence of her husband, was assisted by her son, Martin, welcomed us to her marvellous garden at Witbank, approximately 130 kilometres east of Pretoria. As we drew up outside we were aware that we were somewhere special as we looked into a veritable jungle of ferns. Climbing up a small tree at the start of the driveway was a very large and fertile specimen of *Stenochlaena tenuifolia*. At the front and side of the house were very large beds of trees, including tree ferns, which formed a very attractive screen from the road. The tree ferns included *Cyathea dregei*, *C. robusta*, and *C. cooperi* and its cultivar 'Cinnamon'. Herbaceous ferns included *Woodwardia radicans*, *Hypolepis sparsisora*, *Pteris fauriei* and, surprisingly, *Equisetum giganteum* and *E. scirpoides*.

Around the back of the house were two shade-houses and several more borders of ferns. One shade-house had platyceriums including *Platycerium willinckii*, *P. superbum* and *P. veitchii*. In the other was a range of ferns such as *Asplenium bulbiferum*, *A. boltonii* and *Angiopteris evecta*. In and around the garden was a range of other blechnums including *Blechnum fluviatile*, and also *Didymochlaena truncatula* and *Polystichum polyblepharum*.

Leaving the de Jager garden, with its mix of native and exotic ferns, we faced a long drive of over 200 miles, but the journey was broken at the Klipkraal Tree Fern Forest (25°02′07.2″S, 30°49′34.8″E). Here, amongst conifer plantations, was a small reserve of the

photo: J. Whiteley

Klipkraal tree fern forest, South Africa

Patrick Acock, Klaus Mehltreter and Allan Nel discuss *Blechnum tabulare*, with *Cyathea dregei* in background

native tree fern forest with *Cyathea dregei* dominant. After we had dealt with the paperwork the guard lifted the barrier and we were allowed to proceed to our lunch spot on the veranda of a field station overlooking a lake. In the wet area bordering the lake was an area of very well developed *C. dregei*. These plants were quite spectacular and were the largest we were to see in the wild, being at least twice as high as any others. Growing amongst these were *Thelypteris confluens*, *Osmunda regalis*, *Cheilanthes viridis*, *Blechnum tabulare*, *Christella dentata*, *Pleopeltis macrocarpa*, *Macrothelypteris torresiana* and *Dryopteris athamantica*.

Later in the afternoon we visited the MacMac Falls (25°00′05.5″S, 30°49′11.3″E) – briefly, as the reserve was about to close. Along the approach to the falls we saw *Cheilanthes viridis* var. *viridis*, *C. involuta*, *Asplenium aethiopicum*, *Cheilanthes quadripinnata*, *Mohria vestita* and *Pteridium aquilinum*.

After more driving we entered an unmade road leading to Mount Sheba Forest Resort, our base for the next three nights. As we descended through the trees, large numbers of ferns were seen on the floor and edge of the forest as well as many growing epiphytically. It promised a great two and a half days of ferning to come.

Tuesday 21st February – Marco's Mantle Walk & 'Lost City' rock formations, Mount Sheba Reserve, Mpumalanga Province **Allan & Jolanda Nel**

Mount Sheba Resort is situated on the Mpumalanga escarpment, about ten kilometres from the old mining town of Pilgrim's Rest. Although the area is known for pine plantations, most of the approximately 1,500 hectares of the Mount Sheba Reserve is unspoiled indigenous vegetation.

Marco's Mantle walk started close to the hotel (24°56′21.04″S, 30°42′46.90″E) and followed a three-mile circular route through the Mount Sheba Forest. John Burrows, co-author of the new Southern Africa Flora, joined us for the walk. At the start we were greeted by *Asplenium rutifolium* with freshly unfurled rosettes of fronds. As the path wound along, we recorded a number of ferns on the banks including *Asplenium boltonii*, *A. lobatum*, *A. varians* subsp. *fimbriatum*, *A. aethiopicum* subsp. *aethiopicum*, *A. splendens* subsp. *splendens*, *Cheilanthes viridis* var. *viridis*, *Dryopteris pentheri* and *Pteris catoptera*. An extremely large *Polystichum pungens* was found and John Burrows, agreeing that it was unusual, recorded the location and collected a frond. At the stream we encountered *Nothoperanema squamiseta* and *Stegnogramma pozoi*. We came across huge *Ptisana* (*Marattia*) *fraxinea* var. *salicifolia*, its beautiful new pink fronds looking like little hands reaching out. The sound of the waterfall meant that a short break was imminent; in the heat, some cool refreshment was much needed. Here, we recorded *Asplenium monanthes*, the proliferous *A. protensum* and *Athyrium newtonii*. There were even filmy ferns such as *Crepidomanes inopinatum* on some of the tree trunks. As we proceeded along the stream, *Loxogramme abyssinica* became abundant in the trees. The turn-off to the second waterfall signalled a lunch break.

Refuelled and refreshed, it was time to continue, noting *Cheilanthes hirta* var. *nemorosa* before we left. Not far from here was the end of the road leading back to the hotel, but before ascending we saw a colony of *Adiantum poiretii* and along the road was *Dryopteris athamantica*. Exhausted, we reached the hotel, and just below the tennis courts recorded *Lycopodium clavatum*, rambling with its twin-cones waving in the wind.

When the threat of a storm and heavy thunder had passed, we visited the 'Lost City' above the forest margin (25°00′05.5″S, 30°49′11.3″E). This area is very exposed and the rocks of a large outcrop, weathered over thousands of years, give the impression of the ruins of an ancient, lost city. It was a clear day, but in mist the area can be very eerie. The unique location, geology and climate provide a specific micro-climate and habitat for some unusual ferns. Huge clumps of *Cheilanthes multifida* subsp. *lacerata* grew at the bases of many of the 'ruins'. *Elaphoglossum acrostichoides* and *Asplenium friesiorum* abounded and large colonies

of *Huperzia gnidioides* were frequent. *Selaginella dregei* was so green that one could be excused for confusing it with *S. caffrorum* var. *caffrorum*. In small crevices in the rocks many plants of the white form of *Pityrogramma argentea* were at home, and newly unfurled fronds of *Blechnum tabulare* were visible among the tall grasses of the surrounding sward. Some rich ferning accomplished, we returned to the hotel just as the rain started.

Wednesday 22nd February – The Pinnacle & Fairyland Forest, Blyde River Canyon Nature Reserve, & Robbers' Pass, Mpumalanga Province **Tim Pyner**

photo: J.M. Ide

Mohria marginalis
en route to Fairyland Forest

We stopped in Graskop to pick up our Guide for the day, Leon Kluge, a keen field botanist and trained horticulturalist with an international reputation for his garden designs and floral displays, which include the outstanding South African displays at Chelsea Flower Show. Venturing onto the mist-shrouded hills of the Blyde River Reserve, we soon arrived at the top of the deep Blyde River Canyon where we could look out onto a large rocky monolith, The Pinnacle (24°54′39.3″S, 30°51′00.8″E). Or we could have done on a clear day; all we could see was fog! However, undeterred, we started hiking towards the Fairyland Forest, taking care to keep up with our informative guide for fear of becoming lost in the fog, and negotiating at one point a shallow but extremely slippery stream. Only upon our return did we discover that we had been just a few steps from the lip of a waterfall plunging into the mists below! *Sticherus umbraculiferus*, *Blechnum tabulare* and the distinctive local subspecies of bracken, *Pteridium aquilinum* subsp. *capense*, were growing in the rocky terrain and we soon spotted our first new fern of the day, *Oleandra distenta*, growing on the rocky lip of the gorge. Continuing to slowly trudge onwards and upwards through sodden grassland overlying sheet rock, we made our way towards our destination. Larger rocks started to appear and ferns became more frequent. One fern in particular I found extremely attractive, the velvety hairy *Cheilanthes buchananii*, in perfect condition under rocky overhangs.

After a scramble up a rocky trail and a short lunch break we entered a small, quiet extension of the Forest (24°55′32.59″S, 30°51′47.39″E), which is named after the sparkling dew drops that still coat the extensive moss, lichen and fungal colonies when the daily mists lift. We immediately found ourselves knee-deep in ferns, mainly *Asplenium aethiopicum* subsp. *tripinnatum* and *Rumohra adiantiformis* mingling with *Asplenium boltonii* and *Cheilanthes viridis* var. *viridis*. Large rocks were home to superb colonies of *Elaphoglossum acrostichoides* and *E. macropodium*, both with many fertile fronds. These two species are rather similar in appearance so it was useful to be able to compare them *in situ*. The sandstone rocks also provided an ideal habitat for filmy ferns, first *Hymenophyllum capense* and then, after struggling through tight gaps and across steep gulleys, an old friend, *H. tunbrigense*, looking very similar to British plants. However, the jewel in the crown here was a massive sandstone wall covered with a dense carpet of softly hairy, ferruginous fronds dangling from the rock-face. This astonishing spectacle was provided by *H. capillare* var. *alternialatum*. Having never seen hairy or coloured filmy ferns before, this, for me, was one of several highlights of the trip. Upon returning to the vehicles the mist had cleared slightly and we were able to make out large crowns of *Cyathea dregei* on the walls and floor of the canyon.

On our way back to Mount Sheba, we pulled into a small lay-by on Robbers' Pass (24°52′14.9″S, 30°41′44.4″E), near the old town of Pilgrim's Rest, for a final treat: the elusive *Schizaea pectinata* with its grass-like fronds, some tipped with sori, well concealed at the base of large rocks.

photo: J. Whiteley

***Schizaea pectinata* at Robber's Pass**

Thursday 23rd February – Bourke's Luck Potholes, Blyde River Canyon Nature Reserve, & Kruger National Park, Mpumalanga Province

Avril & David Walkinshaw

We left Mount Sheba Hotel at 8.20a.m. in bright sunshine, stopping briefly in the nearby wood (24°43′53.40″S, 30°46′33.82″E) where *Asplenium gemmiferum* and *Cyathea capensis*, both new to the excursion, were recorded, as well as a number of other taxa including *Sticherus umbraculiferus* and *Lycopodium clavatum*. Beyond the wood we stopped to photograph a spectacular display of wild nerines in a large meadow and recorded *Dicranopteris linearis* nearby, before continuing to Bourke's Luck Potholes in the Blyde River Canyon Reserve, approximately 40 kilometres north of Mount Sheba on Route 532.

The badly pot-holed approach road to the Reserve (24°48′35.7″S, 30°46′34.4″E. N.B. road not found on all maps!) required careful driving. At our first stop by a bridge we recorded *Adiantum capillus-veneris*, *Pteris vittata* and *Thelypteris confluens* by the river, and at the second stop *Cheilanthes eckloniana*, *Asplenium capense* and *Pteridium aquilinum* subsp. *capense*.

We parked at Bourke's Luck Potholes Visitors' Centre (24°40′22.53″S, 30°48′31.80″E) on the reserve's western boundary and set off immediately to the confluence of the Blyde and Treur rivers, where water-borne sand and rocks have scoured out enormous potholes and gorges in the yellow and orange Black Reef quartzite river-bed. Several bridges and tracks allowed dramatic views of the swirling waters and amazing rock formations below. Species of special note were *Isoetes transvaalensis* and, on an inaccessible cliff, a large clump of *Psilotum nudum*. Other interesting taxa included *Asplenium cordatum*, *A. simii*, *Cheilanthes viridis*, both var. *viridis* and var. *glauca*, *Pellaea calomelanos* and *Selaginella dregei*.

The day was very hot, and refreshed after a picnic lunch we set off for the Kruger National Park, stopping on the way out of the Reserve to view the awesome scenery at the Three Roundavels Viewing Point near Leroro (24°32′45.6″S, 30°43′20.9″E). Here we recorded *Pyrrosia schimperiana* var. *schimperiana* sheltering among the rocks. Further along the road, the star of the day, *Actiniopteris radiata*, was recorded growing in the rocky roadside bank.

The regular afternoon thunderstorm with heavy rain had cleared before we entered the Orpen Gate of the Kruger National Park at 3.30p.m. Still approximately 45 kilometres from our camp at Satara, we excitedly spotted the wildlife of the park along the way, from marabou storks to hippopotami. After a welcome drink at the camp, we were whisked off on a game drive in open vehicles. The rich grasslands supported numerous herds of herbivores, and we also saw leopards and hyenas. One highlight of our time in the Park was a night-time barbecue in the bush. Two members of the party had reason to be particularly grateful for the presence of armed guards when they encountered a black mamba while being escorted to the toilets!

On the drive back to camp our searchlights disturbed a dozing, elderly male lion, but when it started to growl and roar we left smartly, returned to camp, took our malarial pills and needed no help to fall asleep.

Friday 24th February – Kruger National Park & Lowveld National Botanic Garden, Nelspruit, Mpumalanga Province **Barry Cameron**

The keen game spotters went off in the cars at 5.30a.m. after only a few hours of sleep following our midnight arrival. Before they returned, the rest of us had the opportunity to be more leisurely and to see the Satara Rest Camp in daylight. The camp was situated in a vast grassy plain dominated by marula, knob thorn and round-leafed teak. About 20 accommodation units – small bandas (South African round huts) with stone walls and neat thatched roofs were arranged in a circle. The centre was well-treed and alive with bird-life, most noticeably red-billed hornbills, red-winged starlings and a very noisy group of arrow-marked babblers. Breakfast was not provided as it was a self-catering camp but our thoughtful guides, Jolanda and Allan, had brought a snack to sustain us until lunch-time.

We departed Satara Camp at 9.30 and on the three-hour drive through the Kruger Park to our exit, Numbi Gate, we were lucky enough to see giraffe, elephant, hippopotamus and large herds of impala. We were also fortunate to have a rare sighting of a leopard as it emerged from the bush and crouched beside Jolanda's and Allan's car, at one point looking ready to spring through the open window onto Jolanda's lap! Among the many birds we saw vultures, Bateleur eagle, hammerkop and lilac-breasted rollers. Before exiting, we had a welcome unscheduled lunch stop at the world-renowned Skukuza camp. Everyone had enjoyed the brief opportunity to see some of South Africa's wildlife in its natural habitat. The bush was green with the summer rain and the well-treed, rolling landscape was most attractive.

After leaving the park we headed for Nelspruit, the major city of the Lowveld Region, with its warm, humid, subtropical climate. We reached the Lowveld National Botanic Garden (25°26′51.69″S, 30°58′44.50″E) only an hour and a half before it closed. We quickly dispersed in small groups to see the flora of this well run garden, which included a raised board-walk through the 'rain forest' section with its many educational display boards to the suspension bridge across the river and waterfall. Among the many ferns, those that caught the eye included the indigenous *Cyclosorus interruptus*, *Lygodium kerstenii*, *L. microphyllum*, *Microsorum punctatum*, *Stenochlaena tenuifolia* and the naturalised, invasive *Macrothelypteris torresiana*. The garden also contained an impressive number of cycad species, mainly of the indigenous genera *Encephalartos* and *Stangeria*, but also many non-indigenous species of *Cycas*, *Zamia*, *Lepidozamia* and *Macrozamia*.

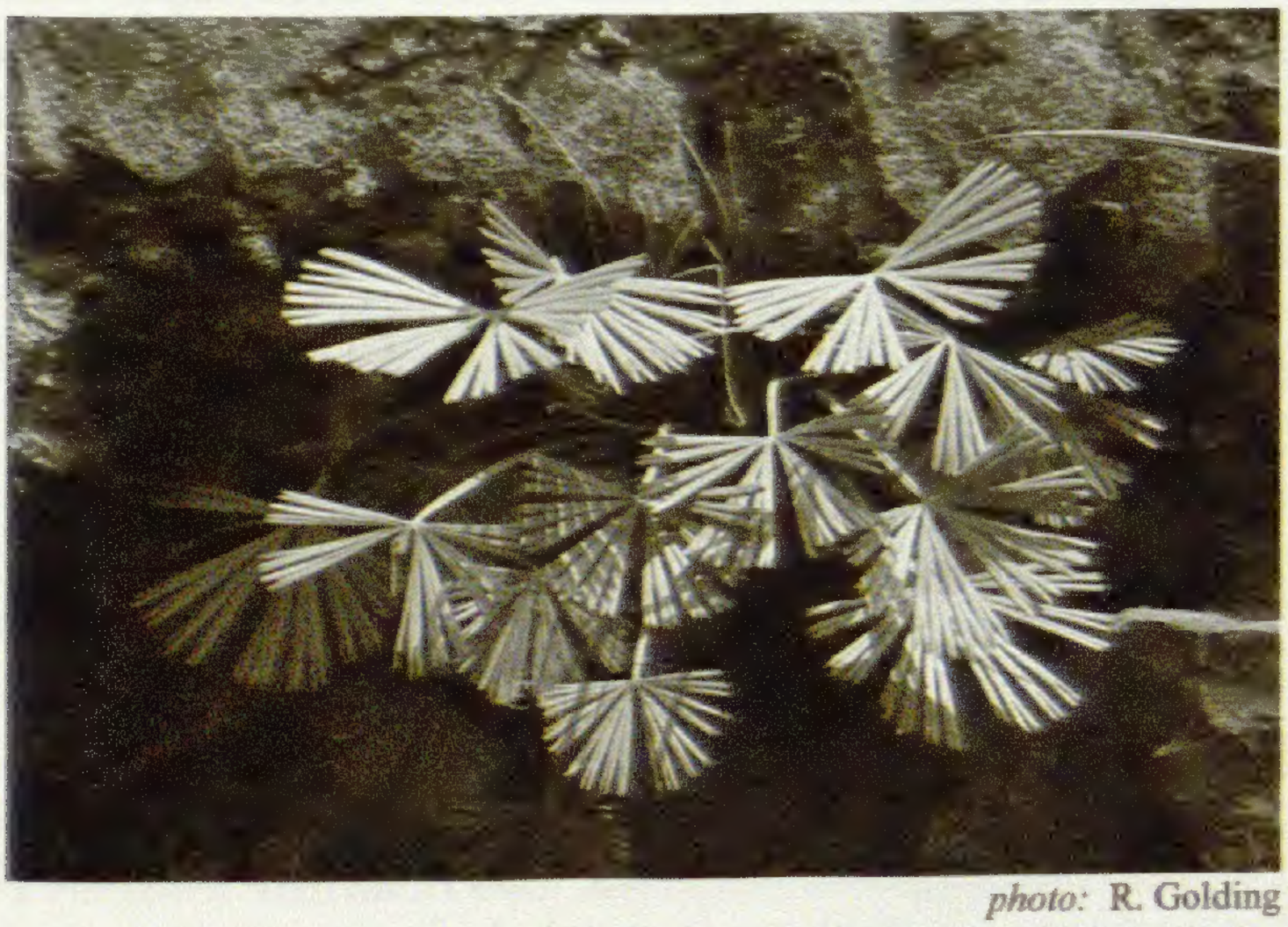


photo: R. Golding

***Actiniopteris radiata*, en route to Kruger National Park**

From here it was a further 40 kilometres to Sudwala Lodge for the night stop. We arrived at 6.30p.m. to be welcomed at the reception with a display arranged around a very life-like, soft, cuddly leopard with a sign around its neck, "Sudwalaskraal welcomes the Fern Group".

Saturday 25th February – Sudwala Caves road, Mpumalanga Province; travel to Golden Gate Highlands National Park, Maluti Mountains, Free State Province **Grace Acock**

The group had unfortunately arrived too late the previous evening to complete the planned itinerary, therefore Allan arranged for anyone who wanted to meet at 5.30a.m., the

opportunity to drive up near to Sudwala caves (25°22′09.91″S, 30°41′58.49″E) and walk down before breakfast. It was as well that most of us availed ourselves of this opportunity as we saw *Anemia dregeana*, *Doryopteris concolor*, *Asplenium capense*, *Hypodematium crenatum*, *Adiantum incisum* and the alien *Pityrogramma calomelanos* var. *aureoflava* (possibly originally introduced for horticultural purposes), with a few of the common ferns we were seeing in most places. This newer subset of ferns seemed to be colonising the dry widened roadside banks and exposed rock-faces.

After breakfast, we left Sudwala Lodge for the 600-kilometre journey southwards through Mpumalanga and the Free State to the Golden Gate Highlands National Park using mainly toll roads, which meant that we made excellent progress. The scenery changed from grass-covered hills with occasional trees to vast areas of open grassland, with some maize cultivation. We passed through cattle and sheep farming areas and orchards, and in several locations passed large fields of sunflowers.

After a third stop the scenery changed again as we drove along the ascending road among dramatic rocks, stopping at Dolomite View to photograph the stunning rock formations of the Golden Gate. Reaching the Golden Gate Highlands National Park, we negotiated the checkpoint and continued upwards, arriving at the Hotel (about 2,000 metres) by 5p.m. This was possibly the first time that the group of pteridologists had arrived on schedule! By 5.30p.m. some members of the group were out in the fresh air to walk to a local waterfall (28°30′30.85″S, 28°37′03.38″E), where we added *Cheilanthes eckloniana*, *C. hirta* var. *brevipilosa*, *C. multifida* subsp. *lacerata*, *C. quadripinnata*, *Mohria rigida* and *Pellaea calomelanos* var. *calomelanos* to the record of ferns.

Sunday 26th February – Echo Ravine & Boskloof trails, Golden Gate Highlands National Park, Free State Province

Klaus Mehltreter

A cool autumn morning with a clear sky awaited us as we hiked from our hotel in the Golden Gate Highlands National Park (28°30′20″S, 28°36′37″E, 1,900 metres altitude) to the Echo Ravine and Boskloof trails (28°30′22.23″S, 28°36′12.49″E). The hillsides were densely covered with grasses (e.g. *Themeda* sp.) and some herbs (e.g. *Kniphofia triangularis* and species of *Lobelia*, *Sebaea* and *Helichrysum*). On the lower slopes were dense patches of *Leucosidea sericea* (old wood, Rosaceae) with its silky-haired leaves and flaking bark. Ferns, such as the desiccation-tolerant *Cheilanthes quadripinnata* and *C. eckloniana*, grew mainly along the disturbed margins of the trail, where they could compete with grasses. Within an hour the temperature rose and it became very hot. Just in time, we reached the shaded lower sandstone levels of the cliffs of the ravine, which erode faster than the 180 million year old Drakensberg Basalt and Quartzite that cap the Maluti Mountains. Water was dribbling down from the top of the cliff. We headed into the shady ravine, where the fern flora became more diverse, although the total cover stayed below one per cent. *Polystichum transvaalense* and *P. monticola* were the largest terrestrial ferns in the ravine. Around the rocks, on a thin layer of humus, grew scattered plants of *Asplenium adiantum-nigrum* var. *adiantum-nigrum*, *A. monanthes*, and *A. trichomanes* subsp. *quadrivalens*. On the wettest patches of the rock walls grew larger colonies of the maidenhair fern *Adiantum capillus-veneris* and the gesneriad, *Streptocarpus gardenii*, with its single entire leaf and inflorescence. Looking back out to the valley, the two curved and overhanging walls of the ravine appeared as petrified waves shortly before breaking.

Heading back out of the ravine, we crossed the slope of the hill to reach the next gorge, the Boskloof (*kloof* is a mountain gorge), with its remnant forest. On the open grassland, we spotted several individuals of *Ophioglossum lusoafricanum*. It is amazing how such small plants can compete with the taller grasses and herbs, though they may rely on disturbed sites. Some species of *Selaginella* have also developed astonishing adaptations to the dry and sunny conditions of the rock surfaces. The three species we saw – *S. caffrorum*,

S. dregei and *S. mittenii* – are cushion plants with creeping rhizomes and very small leaves that can bend inwards and turn grey during periods of drought.

In the shady Boskloof, we added to the species list *Woodsia burgessiana*, *Asplenium aethiopicum* subsp. *aethiopicum*, *A. splendens* subsp. *drakensbergense* and *A. stoloniferum*. Plants of the last species were the smallest and seemed to be struggling to survive. Their once-pinnate leaves, however, had terminal buds that grew into new plants, thereby providing potential for the survival of the local population.

Monday 27th February – Mushroom Rock Trail & round-about explorations, Golden Gate National Park, Free State Province **Paul Ripley**

Leaving the vehicles at the Glen Reenen Rest Camp and Information Centre (28°30′22.23″S, 28°36′12.49″E), we set out along the Mushroom Rock Trail, another of the many well marked trails that traverse the steep slopes below the huge rock outcrops that are a feature of this area. We soon saw *Asplenium platyneuron* and *Mohria vestita*, and made a short detour to view *Ophioglossum lusoafricanum*. *Cheilanthes quadripinnata* was very common among the rocks. We eventually came to a rock overhang at the base of the Mushroom Rock, where we found *Athyrium crassicaule* and *Polystichum monticola* as well as two new species – *Polystichum sinense* and *P. dracomontanum*. Much discussion centred on the possible existence here of a hybrid between these last two species. At this rich site we also found *Dryopteris athamantica* and the rare *D. esterhuyseniae*. *Selaginella mittenii* and *S. dregei* were also present.

Descending to the valley floor, a few of us took a 'short cut' along the river valley and soon found a fine *Asplenium aethiopicum* subsp. *aethiopicum* and *A. adiantum-nigrum* var. *adiantum-nigrum* among ferns seen already. *Adiantum capillus-veneris*, *Equisetum ramosissimum* and *Pteris cretica* were growing in most unfavourable locations: right beside the road in a dry and dusty, fume-laden environment.

After lunch the group split, some shopping in nearby Clarens, the remainder taking either the Holkrans trail behind our hotel (28°30′20″S, 28°36′37″E; 1,900 metres altitude) or, like me, a higher walk to Brandwag (Buttress) trail (28°30′22.23″S, 28°36′12.49″E), a huge overhanging outcrop that towers over the valley and hotel. Both groups saw *Blechnum australe* for the first time. On the high path we found *Polystichum sinense* and *P. monticola*; the lower group additionally found *P. dracomontanum*, *Woodsia burgessiana*, *Asplenium stoloniferum* and *Dryopteris pentheri*, among ferns found earlier. I was kindly shown these later, along with *Cheilanthes eckloniana*, which I had missed in the morning.

To avoid retracing my steps, I cut steeply down below a rock overhang covered with *Adiantum capillus-veneris*, and by a happy chance encountered Allan near the Glen Reenen Rest Camp. He led me to a pool below a waterfall above Glen Reenen and, after a most refreshing swim, pointed out *Mohria vestita* with its very strongly carrot-scented fronds; regrettably I never did come to terms with the mohrias on this trip.

The day was rounded off with a tourist visit to the Drakensberg View, which affords dramatic views to the Drakensberg mountains in the distance and orchids growing in the grass sward around the viewpoint, including a rare black orchid, *Corycium dracomontanum*.

Tuesday 28th February – Holkrans trail, Golden Gate National Park, Free State Province; Sentinel Peak, KwaZulu-Natal Province **Ian Bennallick**

The day dawned sunny with a clear and hot day awaiting us. Before breakfast, several folk who had not done so yesterday walked the Holkrans trail, the small track above the hotel, particularly to see the interesting *Adiantum poiretii* var. *sulphureum*, a variety not recognised by all taxonomists.

En route to our ferning site for the day, we drove through the young and sprawling township of Puthaditjhaba, then continued to the southern end of the Royal Natal National Park in the Drakensberg Mountains on the KwaZulu-Natal/Lesotho border. We eventually

climbed a steep, unmade road leading to Witsieshoek and Sentinel Peak, a large, prominent basalt formation on the Drakensburg ridge, to a car park just below the Peak (28°43′19.20″S, 28°53′47.54″E). The views north and south along the Drakensberg were sensational, with deep valleys sweeping below us, and eroding vertical cliffs high above. The first delight was *Selaginella nubigena* growing on precipitous rock-faces on the edge of very steep cliffs. Dotted around were many flowering plants, especially various *Helichrysum* and *Crassula* species. Along the path, ferns included *Cheilanthes quadripinnata*, *C. eckloniana*, *Mohria rigida* and *Dryopteris esterhuyseniae*, while *Polystichum sinense*, *Dryopteris pentheri* and *Cystopteris fragilis sensu lato* grew below a small hut. We delighted in watching family groups of the rodent-like rock hyrax chase each other over the rocks, while two white-necked ravens fed on discarded sandwiches!

After exploring at the end of the track, the vans were driven slowly back down as we searched the rock crevices of the road cutting, which provided dry areas and patches of damp seepage. Among the many additional taxa of ferns recorded were *Asplenium splendens* subsp. *drakensbergense*, *A. trichomanes* subsp. *quadrivalens*, *A. adiantum-nigrum* var. *adiantum-nigrum*, *A. aethiopicum* subsp. *filare*, *Cheilanthes hirta* var. *brevipilosa* and *Mohria nudiuscula*. A few plants of *Blechnum australe* were seen, and also a few *Woodsia burgessiana* near an area with *Polystichum dracomontanum*. The most interesting fern was the diminutive *Elaphoglossum drakensbergense*, which has a wonderful solid black sorus covering the back of the fertile fronds. Interesting flowering plants included broad-leaved leonotis (*Leonotis intermedia*), with its furry orange flowers, a strange large white-flowered *Harveya speciosa*, apparently parasitic on a large, yellow-flowered composite, an array of *Hesperantha* species, various composites and at least three orchid species. Allan spotted a chameleon slowly climbing the rock-face with typical jerky movements. Birds were numerous, with swifts, swallows and martins flying above us, as well as Verreaux's eagle and peregrine and red-footed falcons.

After lunch at a viewpoint, we continued down the track and again through the township of Puthaditjhaba. At 5.30p.m. we arrived at the Mont-aux-Sources hotel on the north-eastern edge of the Royal Natal National Park. Views of the Drakensberg Mountains were breathtaking, with the high Drakensberg 'Amphitheatre' (a one-kilometre-high, five-kilometre-long escarpment) looming to the west, marking the boundary with Lesotho. With the group settled in the hotel and chalets, we enjoyed drinks on the veranda before dinner.

Wednesday 29th February

Gudu Falls Trail, Royal Natal National Park, KwaZulu-Natal Province **Alison Evans**

It was a glorious morning for our short drive from our hotel to the Royal Natal National Park. A troop of baboons on the road melted away into the undergrowth as we entered the park. We took the essential group photo in the scenic car park before we divided into two parties. Those taking the long route set off along the track to Gudu Falls (28°41′19.5″S, 28°57′00.8″E) and soon listed *Cyathea dregei*, *Mohria vestita*, *Dryopteris pentheri*, *Pellaea calomelanos*, *Cheilanthes eckloniana*, *C. quadripinnata*, and the ubiquitous *C. viridis* var. *viridis*. We took a short detour through some knee-high bracken to see a lovely stand of *Athyrium schimperi*, with its pinkish-red stipes, growing at the base of a rock near to *Thelypteris confluens* and *Dryopteris athamantica*.

Back on the main track, a steep downhill slope on the left of the path was covered with *Osmunda regalis* and *Blechnum inflexum*, and *Mohria marginalis* and *M. nudiuscula* were growing on the small bank on the uphill side of the path. *Sticherus umbraculiferus* marked the border between the sunny, open grassland and the shady forest, and then we were into a profusion of *Dryopteris*. This led to some debate as to the taxa present: probably *D. lewalleana* and *D. pentheri*, but had we found *D. inaequalis*, from which the previous two species have now been separated? Deeper into the forest we started to see *Polystichum pungens* and *P. transvaalense* with its in-turned 'little finger' i.e. the basal basiscopic arista

lying over the surface of the pinnule. *Polystichum monticola* was also recorded and there was an abundance of aspleniums, plus the filmy fern *Crepidomanes inopinatum*.

photo: A.J. Evans

Royal Natal National Park, South Africa

Chris Evans, Elise Knox-Thomas, Patrick Acock, Mark Morgan, Ian Bennallick (*kneeling*), Jolanda & Allan Nel, Jane Whiteley, Grace Acock, Klaus Mehltreter, Avril & David Walkinshaw, Tim Pyner, Barry Cameron, Catherine Brock, Janet Keyes, Wim Burnett, Paul Ripley, John Whiteley, Naud Burnett, Alison Evans, Jennifer Ide, Pat Riehl, Roger Golding

The path up to the Gudu waterfall was very steep and long, but those who were not deterred noted *Amauropelta bergiana* var. *bergiana*, *Cystopteris diaphana* and *Stegnogramma pozoi* in a wettish area, and also added *Elaphoglossum acrostichoides*, *Pleopeltis macrocarpa*, *P. polypodioides*, *Asplenium stoloniferum* and *A. lobatum to* our list. On the way down we found a plant of *A. erectum* var. *erectum*, and two colonies of a gemmiferous *Asplenium* with little plantlets at the junction of the stipe and rachis, as in *A. monanthes* but with divided pinnae reminiscent of *A. lobatum*. Tim Pyner concluded that it was in fact *Asplenium lobatum*, and not a hybrid or new variety as we first thought. [Note. A very interesting plant, the fronds resembling the non-proliferous var. *lobatum* but the plantlets indicating var. *pseudoabyssinicum*. The latter occurs in central Africa, becoming much rarer in the South. It has not been recorded for the Natal Drakensberg and also proliferous fronds have not been recorded from its South African localities. This plant would appear to be an intermediate form. A plantlet taken into cultivation has produced fertile fronds with abortive sporangia, however, this may be due to sub-optimal conditions under cultivation. Further study is proceeding. TP] By now late for our rendezvous with the other party, we hurried down to the Cascades (28°41′22.09″S, 28°56′16.50″E), almost missing a lovely colony of *Huperzia verticillata* on a rock by the path.

Cascades Trail, Royal Natal National Park, KwaZulu-Natal Province **Jennifer Ide**

Starting from the same place, the shorter less strenuous walk followed the Mahai River to the Cascades, where it drops in a series of short falls, providing pools of varying depth. Along its length the trail closely followed the narrow river, with the majority of ferns

growing either on or in the protection of large boulders or on the ground among the shrubby undergrowth, all shaded by the tree canopy. After the trail crossed the river it continued through woodland for much of the remaining distance to the Cascades, except where the river bank widened to a flat terrace with low vegetation dominated by *Pteridium aquilinum* subsp. *capense*. Most of the ferns seen were in common with those found on the Gudu Falls Trail, the exceptions being *Cheilanthes viridis* var. *macrophylla*, *Elaphoglossum aubertii* and *Selaginella kraussiana*. Occasional *Cyathea dregei* when perched on steep streamside banks looked as though they might slide down into the river at any moment.

The day was very hot so it was with some relief that we arrived at the Cascades and cooled our weary feet and bodies by paddling or swimming in the pools and ate our lunch in the shade while waiting for the other group to join us.

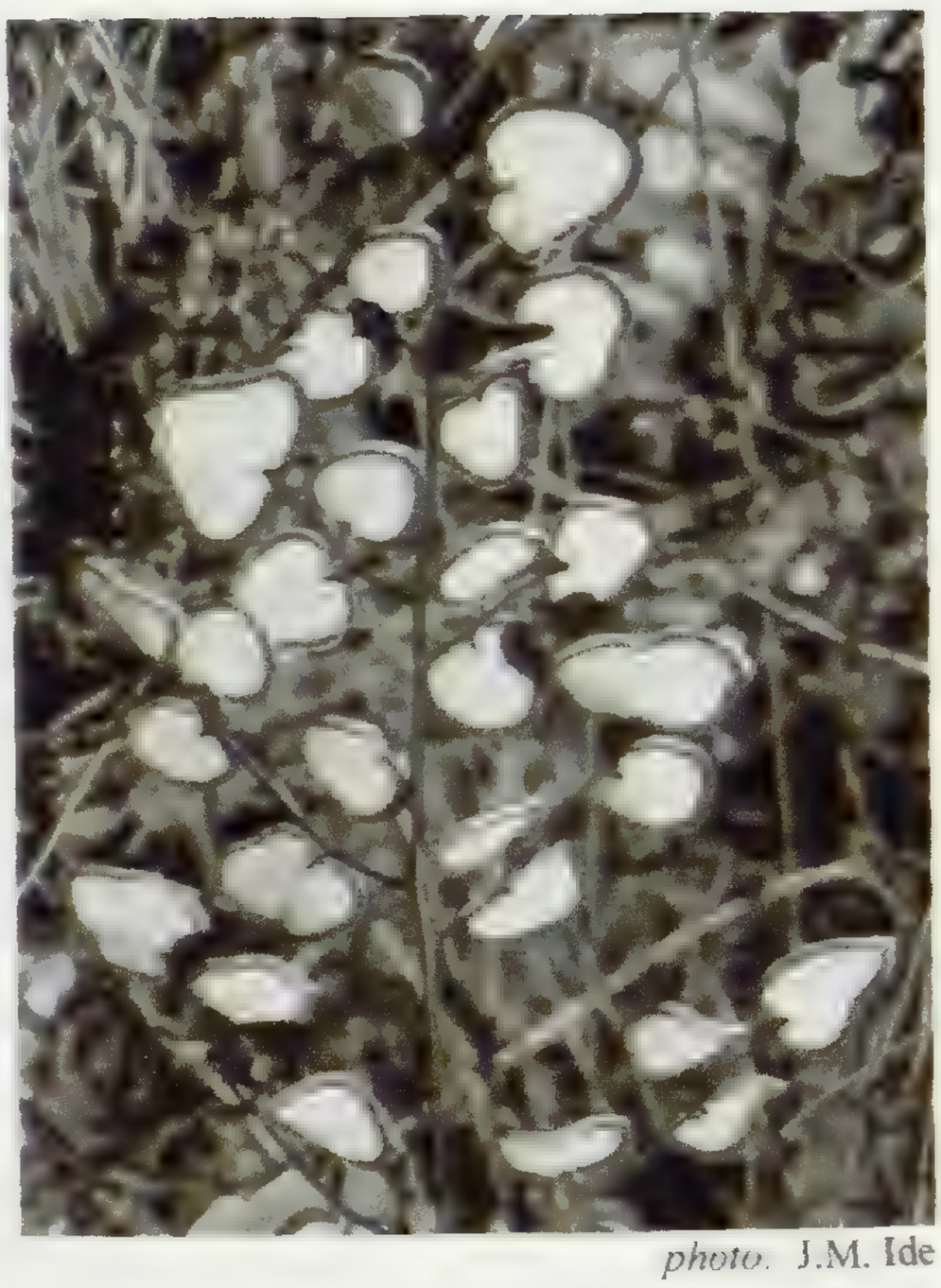


photo. J.M. Ide

***Pellaea calomelanos* at Cascades Trail**

Thursday 1st March – Devil's Hoek trail, Royal Natal Drakensberg National Park, KwaZulu-Natal **Roger Golding**

In the morning, clouds shrouded the view of the amphitheatre from the hotel terrace, giving just intermittent glimpses of the higher peaks of the Drakensberg. After parking in the car park (28°42′34.6″S, 28°56′24.7″E), we set off to explore another valley in the nearby National Park, this time the Tugela (or Thukela) Valley and a short way along the Devil's Hoek River. We soon picked up many now familiar ferns including *Adiantum poiretii*, *Selaginella mittenii*, *Lycopodium clavatum* (typically with more cones per peduncle than the British form), *Asplenium monanthes*, *A. aethiopicum* subspp. *aethiopicum* and *tripinnatum*, *A. varians* subsp. *fimbriatum* and *A. stoloniferum*, *Dryopteris pentheri* and *D. lewalleana*, *Cheilanthes hirta* (more than one variety), all four *Mohria* species (see table) (I never fully managed to sort these out in my mind, although others did better), *Polystichum luctuosum* and *P. transvaalense*, and *Sticherus umbraculiferus*. In a grotto-like rocky outlet of a stream we found the tiny *Elaphoglossum spathulatum* var. *spathulatum*, the only new taxon for the day.

The clouds continued to give tantalising glimpses of the higher peaks, with the dramatic Devil's Tooth occasionally visible on the far side of the valley. The threat of rain failed to materialise – in fact, lack of rain in recent days was showing in the vegetation: a filmy fern on a boulder by the path was so desiccated as to be unidentifiable.

The other vegetation continued to provide fascinating distractions, particularly proteas, mainly *Protea caffra* and *Cussonia paniculata*; although not the best time of year for flowering plants there were still plenty to catch the eye, such as the bright yellow *Haplocarpha scaposa*, *Galtonia candicans* and *Monsonia attenuata* with its delicate white petals with black veins. We also saw several land crabs: two distinct colour forms, probably *Potamonautes clarus* and *P. depressus*.

Cyathea dregei was frequent again, growing in damper areas (including a tiny specimen growing out of a crack in a boulder), and as we made our way back down the valley we encountered *Cheilanthes viridis* var. *macrophylla* growing to an impressive size – some close to a metre tall, and other familiar ferns such as *Asplenium theciferum*, *Pleopeltis polypodioides* subsp. *ecklonii* and *Athyrium schimperi*. We stopped at a rock overhang to see some San rock paintings – rather indistinct, but the forms of hunters and various animals including eland were discernable.

After a late lunch back at the car park, a few of us took a few minutes to explore Otto's trail, the path by the nearby river, where the ferns included *Osmunda regalis*, *Dryopteris athamantica*, *Lepisorus schraderi* and *Doryopteris concolor* (looking rather dried out).

Back at the hotel the weather finally broke, with heavy rain and thunder. In the evening Barry Cameron gave us a fascinating talk on Madagascar, which left many of us dreaming of a future trip there. This was followed by thanks and presentations – first to Jolanda and Allan for organising such an amazing trip for us and then to Jennifer for managing all the details from our end.

Friday 2nd March – Makaranga Lodge Garden, Kloof, & Botanic Gardens, Durban, KwaZulu-Natal **Mark Morgan**

Immediately after breakfast we left the Mount-aux-Sources Hotel for our final destination of Durban. We had a three-hour drive to our first stop at the Makaranga Lodge and Garden at Kloof, 28 kilometres north-west of Durban (29°47′26.2″S, 30°49′0.44″E). Given the reduced altitude and proximity to the coast, the increase in humidity was very noticeable. Following an excellent lunch we spent an hour exploring this 30-acre subtropical garden, which was begun in 1976 with a combination of exotic and indigenous flora. Following a walk through the Andrew Walters Cycad garden, we came across very large specimen plants of *Todea barbara*. The garden also had a good selection of tree ferns, including *Cyathea cooperi*, *C. dregei*, *C. dealbata*, *Dicksonia antarctica* and *D. squarrosa*. *Platycerium bifurcatum* was growing on many of the trees in the garden.

We then drove into Durban to visit the Botanic Gardens (29°50′47.4″S, 31°0′23.4″E), which are situated within the city itself, providing a green oasis for the citizens of Durban. The most famous plant in the garden is the original collected specimen of the cycad *Encephalartos woodii*, which is now listed as extinct in the wild, all other specimens being clones of this one. It was collected in 1895 in KwaZulu-Natal by John Medley Wood, then curator of the Durban Botanic Gardens and director of the Natal Government Herbarium of South Africa. The plant is a male; no female plants have ever been found. An early fern sighting was an impressive climbing *Stenochlaena tenuifolia* with its distinctive, fine, feathery-looking fertile fronds, reminiscent of an ostrich plume. The group spent some time investigating the impressive Fern Dell, which had a good example of *Angiopteris evecta* alongside *Cyathea medullaris* and *C. tomentosissima*, and the long Fern House, reminiscent of the Filmy Fern House at the Royal Botanic Gardens Kew in its construction, but without the internal glass housing. Sacred ibis and hadada walked the lawns and the brilliantly coloured little red bishop, nesting in reeds of a large pond, especially had the cameras snapping.

We drove to our Hotel on the outskirts of the city for our last night together before going our separate ways the next morning – some going home from Durban and others flying to Cape Town.

And finally **Jennifer Ide**

There are about 320 taxa of ferns and lycophytes native to Southern Africa, of which we saw at least 136. The highest concentration is in the eastern provinces and Lesotho, with the next highest in the Western Cape. A casual look through the new Southern African flora, with its distribution maps, reveals that much of the rest of Southern Africa is a desert in terms of pteridophytes and climatically, hence our visit centring on the eastern part of the region, which, for a bonus, has most stunning scenery. We are most grateful to Jolanda and Allan for the careful thought, all the planning work (including pre-visiting hotels) and their sheer generosity in so many ways, which ensured that the excursion was a success in every way and, above all, was interesting, enjoyable and fun. Thank you both.

Acknowledgement: I would like to thank Jolanda Nel for her considerable help in the initial editing of this report and Tim Pyner for compiling the table of taxa recorded. Jennifer Ide.

Reference

Crouch, N.R., Klopper, R.R., Burrows, J.E. & Burrows S.M. (2011) *Ferns of Southern Africa: A Comprehensive Guide*. Publ. Struik Nature, Cape Town.

BPS South Africa excursion 2012: recorded taxa

Gardens not included. Nomenclature follows Crouch *et al.* (2011); page no. given in first column.

SITES (*map references included in report*)

A Near Stone Cradle Restaurant
B Rietvlei NR
C Klipkraal Tree Fern Forest
D MacMac Falls
E Mt Sheba Reserve - Marco's Mantle Walk
F Mt Sheba Reserve - 'Lost City'
G The Pinnacle & environs
H Fairyland Forest
I Robbers' Pass
J Mt Sheba Reserve - Sheba Walk
K On route to Bourke's Luck Potholes
L Bourke's Luck Potholes
M On route to Kruger NP
N Sudwala Cave Road
O Golden Gate Dolomite View
P Golden Gate Echo Ravine & lower slopes
Q Golden Gate Boskloof
R Mushroom Rock Trail & Valley Floor
S Holkrans Trail & Brandwag Trail
T Witsieshoek & Sentinel Peak Track
U Gudu Falls Trail & Look Out
V Cascades Trail
W Devil's Hoek Trail
X Picnic site & Otto's Trail
Y Umhlanga NR (Note 4)

Flora p. no.		19 Feb		20 Feb		21 Feb		22 Feb			23 Feb				25 Feb		26 Feb		27 Feb		28 Feb	29 Feb		1 Mar		3 Mar
	Sites	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**	**U**	**V**	**W**	**X**	**Y**
306	Actiniopteris radiata													+												
430	Adiantum capillus-veneris											+					+		+	+						
424	A. incisum														+											
432	A. poiretii var. poiretii					+																+		+		
432	A. poiretii var. sulphureum (Note 1)																			+						
694	Amauropelta bergiana var. bergiana					+																+				
194	Anemia dregeana														+											
468	Arachniodes webbiana subsp. foliosa					+																				
642	Asplenium adiantum-nigrum var. adiantum-nigrum																	+	+	+	+					
646-8	A. aethiopicum subsp. aethiopicum				+	+	+	+		+								+	+	+		+		+	+	
646-8	A. aethiopicum subsp. dodecaploideum																					+				
646-8	A. aethiopicum subsp. filare																				+					
646-8	A. aethiopicum subsp. tripinnatum					+			+															+		
590	A. boltonii					+			+		+															
584	A. capense											+			+											

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
582	A. cordatum												+						+							
604	A. erectum var. erectum					+					+											+				
606	A. erectum var. usambarense					+																+				
622	A. friesiorum						+	+		+																
592	A. gemmiferum										+															
636	A. lobatum var. lobatum					+			+		+											+				
610	A. monanthes					+											+					+		+		
612	A. platyneuron																+		+					+		
620	A. protensum					+																				
630	A. rutifolium					+			+		+											+				
654	A. simii												+													
658	A. splendens subsp. splendens					+					+															
660	A. splendens subsp. drakensbergense																	+	+		+					
616	A. stoloniferum																	+		+		+		+		
632	A. theciferum					+			+		+											+	+	+		
614	A. trichomanes subsp. quadrivalens																+				+					
640	A. varians subsp. fimbriatum					+					+											+	+	+		
718	Athyrium crassicaule																		+	+						
716	A. newtonii					+																				
714	A. schimperi																					+		+		
728	Blechnum attenuatum					+																+	+	+		
742	B. australe subsp. australe																			+	+	+	+			
730	B. inflexum																					+	+			
736	B. punctulatum var. punctulatum							+																		
734	B. tabulare			+			+	+																		
292	Blotiella glabra					+																				
340	Cheilanthes buchananii							+						+												
376	C. deltoidea subsp. silicicola	+																								
382	C. dolomiticola													+												
342	C. eckloniana											+				+	+	+	+	+	+	+	+	+	+	
356	C. hirta var. hirta											+			+									+		

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
356-8	Cheilanthes hirta var. brevipilosa															+	+			+	+			+		
358	C. hirta var. nemorosa					+																+				
386	C. involuta var. obscura														+											
402	C. multifida subsp. lacerata						+	+		+						+										
396	C. quadripinnata				+	+		+					+			+	+	+	+	+	+	+		+		
390	C. viridis var. viridis	+	+	+	+	+		+	+		+	+	+	+	+							+	+	+	+	
394	C. viridis var. glauca												+	+	+											
392	C. viridis var. macrophylla																						+	+		
684	Christella dentata					+																+	+			
158	Crepidomanes inopinatum					+																+				
156	C. melanotrichum						+																			
272	Cyathea capensis										+															
270	C. dregei			+		+		+					+									+	+	+	+	
674	Cyclosorus interruptus																									+
see 706	Cystopteris diaphana (Note 2)					+													+			+				
706	C. fragilis subsp. fragilis																+				+	+				
see 712	Deparia petersenii (Note 3)					+																				
172	Dicranopteris linearis					+					+															
334	Doryopteris concolor														+										+	
472	Dryopteris athamantica						+												+			+	+		+	
484	D. estherhuyseniae																		+		+					
476	D. lewalleana					+																+		+		
478	D. pentheri			+		+														+	+	+	+	+	+	
498	Elaphoglossum acrostichoides					+	+		+											+		+	+	+		
510	E. aubertii					+																	+			
508	E. drakensbergense																				+					
500	E. macropodium								+																	
506	E. spathulatum var. spathulatum																							+		
134	Equisetum ramosissimum subsp. ramosissimum		+																+							
32	Huperzia dacrydioides					+																				
34	H. gnidioides						+	+																		
30	H. verticillata																					+				

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
160	Hymenophyllum capense								+																	
168	H. capillare var. alternialatum								+																	
162	H. tunbrigense					+			+																	
492	Hypodematium crenatum														+											
286	Hypolepis sparsisora					+			+																	
60	Isoetes transvaalensis												+													
558	Lepisorus excavatus							+	+																	
556	L. schraderi				+	+																+			+	
540	Loxogramme abyssinica					+			+																	
38	Lycopodium clavatum					+					+													+	+	
490	Megalastrum lanuginosum					+					+															
552	Microsorum scolopendria																									+
198	Mohria marginalis			+				+														+		+		
208	M. nudiuscula																			+	+	+	+	+		
204	M. rigida															+	+	+		+	+			+	+	
206	M. vestita			+	+	+		+						+			+	+	+	+		+	+	+	+	
470	Nothoperanema squamiseta					+																				
528	Oleandra distenta							+	+																	
116	Ophioglossum lusoafricanum																+		+							
108	O. reticulatum																								+	
110	O. vulgatum subsp. africanum						+																			
142	Osmunda regalis			+																		+			+	
410	Pellaea boivinii												+													
418	P. calomelanos var. calomelanos	+					+					+	+	+	+	+				+		+	+	+	+	
416	P. pectiniformis							+					+													
312	Pityrogramma argentea						+	+	+																	
314	P. calomelanos var. aureoflava												+		+											
568	Pleopeltis macrocarpa			+	+	+				+				+			+	+				+		+	+	
566	P. polypodioides subsp. ecklonii				+	+					+											+		+		
680	Pneumatopteris unita																									+
462	Polystichum dracomontanum																		+	+	+					
466	P. luctuosum					+																		+		

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
450	P. macleae					+																				
458	P. monticola																+	+	+	+						
454	P. pungens					+																+		+		
464	P. sinense																		+	+	+					
460	P. transvaalense					+											+	+				+		+		
130	Psilotum nudum												+													
284	Pteridium aquilinum subsp. capense			+			+	+		+		+		+								+	+	+	+	
324	Pteris catoptera					+																				
318	P. cretica					+											+		+	+		+	+	+	+	
320	P. dentata					+																		+		
326	P. friesii					+																				
316	P. vittata				+							+			+											
138	Ptisana fraxinea var. salicifolia					+																				
544	Pyrrosia schimperiana var. schimperiana													+												
488	Rumohra adiantiformis							+	+																	
190	Schizaea pectinata									+																
84	Selaginella caffrorum var. caffrorum						+			+							+	+	+							
80	S. dregei						+	+		+			+	+			+	+	+							
96	S. kraussiana					+																	+			
94	S. mittenii																+	+	+	+		+	+	+	+	
90	S. nubigena																				+					
676	Stegnogramma pozoi					+																		+		
176	Sticherus umbraculiferus						+	+			+											+	+	+	+	
672	Thelypteris confluens			+								+										+				
438	Vittaria isoetifolia					+			+																	
708	Woodsia burgessiana																	+		+	+					

Note 1: Adiantum poiretii *var.* sulphureum *recorded at this site, but not recognised in the Flora - see p. 432 last paragraph.*
Note 2: Cystopteris diaphana *is not recognised in South African floras, however, the morphology and habitat at some lower altitude sites seem consistent with this segregate.*
Note 3: *Included under* D. japonica *in the Flora, all plants seen matched* D. petersenii *in morphology and habitat.*
Note 4: *Visited by a few remaining members before leaving for airport.*

Compilation of species recorded by P. Acock, A. Evans, R. Golding, J. Ide, K. Mehltreter, A. & J. Nel, T. Pyner, P. Ripley.

WILTSHIRE (Leader: Nick Hards) – 9-10 June

Paul Ripley (Saturday) & Pat Acock (Sunday)

This meeting was centred at Upavon near the Vale of Pewsey, an area new to me and, I'm sure, to many of us.

Seventeen members assembled about ten miles north-east of Upavon at St Katharine's Church (41/252649). We found *Asplenium ruta-muraria*, *A. scolopendrium* and *A. adiantum-nigrum* growing on the walls of the church and adjacent ha-ha, before moving off to explore woodland near London Ride, Bedwyn Common, an outlier of Savernake Forest. Here we found *Dryopteris filix-mas*, *D. dilatata*, *D. carthusiana*, *D. affinis* and *D. borreri* (there was some discussion on whether this was morphotype 'insolens'), *Athyrium filix-femina*, *Blechnum spicant*, *Polypodium interjectum*, *Polystichum setiferum* and of course *Pteridium aquilinum*. London Ride is one of the last places in Wiltshire that *Oreopteris limbosperma* was seen, but sadly we did not re-find it.

Our leader had organised a sandwich lunch at the Royal Oak, Wootton Rivers, close to the Kennet and Avon canal, which here runs near to the embryonic River Avon. On the canal bank we found *Equisetum arvense* and *E. palustre*, and there was *Asplenium ruta-muraria* on the walls of a lock. In the marshy woodland by the river (41/185621 to 190623), *Dryopteris filix-mas*, *D. dilatata*, *D. carthusiana*, *D. borreri*, *D. affinis*, *Athyrium filix-femina*, *Polypodium interjectum*, *Polystichum setiferum*, *Pteridium aquilinum* and *Asplenium scolopendrium* (by an old sluice) were seen.

photo: A.M. Paul

Paul Ripley, Pat Acock & Roger Golding looking for *Equisetum* hybrids at Jones's Mill NR

photo B.D. Smith

Alison Paul, Eleanor Hards, Howard Matthews, Alison Evans, Brian Dockerill & Pat Acock admire *Dryopteris cambrensis* in West Woods

We then moved to Jones's Mill Nature Reserve (Wiltshire Wildlife Trust; 41/165610 to 175615), which comprises hay meadows, alder carr and water meadows. The water level is controlled and vegetation managed principally by cattle grazing (Belted Galloways). In the water meadows we saw *Dryopteris filix-mas*, *D. dilatata*, *D. borreri*, *Polystichum setiferum* (by the track bank), *Equisetum arvense*, *E. telmateia*, *E. fluviatile* and *E. palustre*; unfortunately no hybrid horsetails were found. In the alder carr *E. telmateia* was extremely abundant, but also present were *D. dilatata*, *D. carthusiana* and *D. filix-mas* (the latter two sparse) and a lovely plant of *D. borreri*. *Asplenium scolopendrium* was growing in the mortar of a sluice on the River Avon.

We ended the evening in traditional fashion with a meal at the Antelope in Upavon, where we raised a glass to the memory of Jimmy Dyce, and to Graham Ackers, so sadly and recently departed. Apart from his herculean work for the Society, Graham was a regular attender of BPS meetings and his presence is sadly missed.

Sunday morning was bright but overcast as 16 of us met up four miles north of Pewsey at Clatford Park Farm (41/1647.6609), where on a wall we found the three spleenworts *A. trichomanes* subsp. *quadrivalens*, *A. adiantum-nigrum* and *A. ceterach* – surprisingly the crenate form. Slightly further north of Clatford Bottom we entered the north-east corner of West Woods (41/1618.6666), one of those glorious beech woods noted for is bluebells; it is also noted for its ancient barrows, including one long barrow. We found large areas covered in ferns and these varied immensely from location to location. Rising on to a plateau we found large quantities of *Dryopteris carthusiana* but despite much *D. dilatata* only one possible hybrid was seen. A strange lady fern caught a few out – it had very little cutting in the pinnules, making it look rather like *Dryopteris cristata*. Not much further on, eagle-eyed Roger Golding spotted from a hundred yards distance a rarity for this part of the country, *Dryopteris cambrensis* with a few crowns; one other plant was found on the banks of the Wansdyke. Besides the more common woodland ferns we were able to add *Blechnum spicant*, *Polystichum aculeatum* and *Polypodium interjectum*. After three hours in the woods we made our way to *The Bell on the Common* at Broughton Gifford, where our leader had laid on sandwiches.

photo B.D. Smith

Great Chalfield Manor

Gill Smith, Tina Matthews, Sharon Pilkington (*at back*), Nick Hards, Brian & Sue Dockerill & Roger Golding looking at ferns in the well

After lunch we visited the nearby National Trust property Great Chalfield Manor (31/860632). Later in the afternoon we met the resident of the house and president of the Wiltshire Wildlife Trust, Robert Floyd, whose father was the renowned botanist Charles Floyd FLS. The Wiltshire vice-county recorder, Sharon Pilkington, joined us to explore the grounds. We saw *Polypodium interjectum* on a roof and also on the bridge below the gardens. A few ferns had been planted near the lake, including two different *Polystichum setiferum* cultivars and *Matteuccia struthiopteris*. Of greater interest was the collection of ferns down the well. Predictably there was *Asplenium scolopendrium* and *A. trichomanes* subsp. *quadrivalens*, but there was also *Cystopteris fragilis* and *Gymnocarpium robertianum*. *C. fragilis* is now very rare in the vice-county whilst there are no other recent records for *G. robertianum*. On the church wall we found more *Asplenium trichomanes* subsp. *quadrivalens*, and *A. ceterach*, once again the crenate variety.

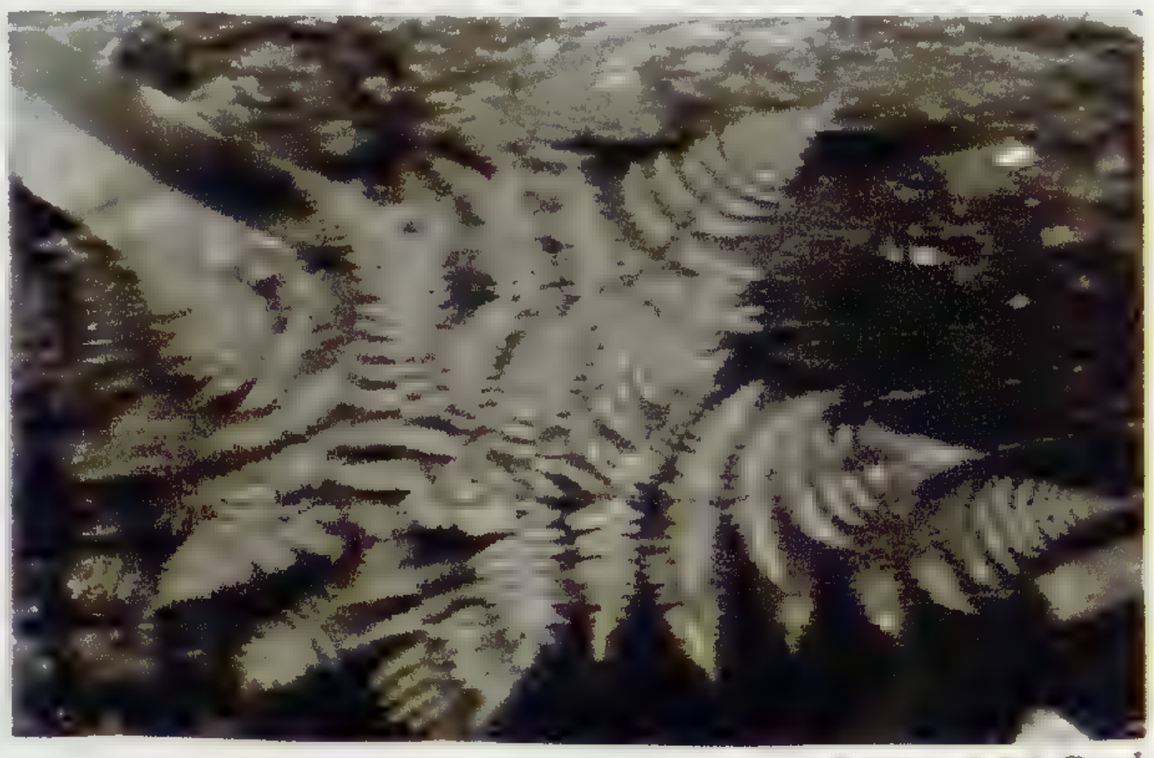


photo A.M. Paul

***Gymnocarpium robertianum* in well at Great Chalfield Manor**

Moving rapidly onwards we drove a short distance to The Courts Garden in Holt village, also National Trust. The onset of rain encouraged a few of us to go straight to the tearooms for a sumptuous cream tea. In the delightful gardens there were very interesting fruit and nut trees with other areas of the garden containing really unusual trees including *Fagus sylvatica* 'Asplenifolia' (fern-leaved beech). The fern border was a little disappointing, having mainly *Dryopteris filix-mas* and *Polystichum setiferum*, but by the tearooms there was *Blechnum chilense*, *Dryopteris erythrosora* and *Polystichum munitum*. Further over around the far side of a small lake there was *Matteuccia struthiopteris*, a few British fern cultivars and *Equisetum arvense*. Also present nearby were *Osmunda regalis*, *Onoclea sensibilis* and *Polypodium vulgare*, plus various cultivars including the Cornish polypody (probably *P.* × *mantoniae* 'Cornubiense') and several crested male and lady ferns.

With the onset of further rain, people dispersed before we could gather together to congratulate and thank Nick and Eleanor Hards for a most splendid and well researched weekend during which 23 native taxa were seen in the wild. It was enjoyed by all and had such a variety of habitats, with ferns growing in the most ideal conditions, possibly because of the very wet spring; I have seldom seen such large perfect specimens. Combined with the excellent company, this made it another fern weekend to remember.

GERMANY & AUSTRIA – 5-14 July

Introduction — Pat Acock

Six of us arrived in Berchtesgaden, Bavaria, on the 4th July and spent the afternoon exploring the wooded slopes above Ramsau. The coolness of the forest was in stark relief to the heat within our holiday village. Later on, awaiting dinner on the sunny terrace, we met up with our leader for the next eleven days, Rolf Thiemann. Rolf had been a little disappointed that I had not been able to accompany him on the GEP Austrian meeting a few years before and kindly offered to run a BPS trip to include Germany and Austria. He had arrived a few days earlier to work out the best arrangement of the days, visiting places he has walked throughout his life.

The next day, while waiting for the rest of the party to arrive, we decided to go with Rolf up into the mountains by cable-car. This turned out to be a most profitable day and also familiarised us with the weather pattern – the day started sunny and hot but later on a thunderstorm developed. Up in the alpine meadows the flowers were simply stunning, with many rare orchids. We soon saw relative rarities for us, such as *Polystichum lonchitis* and *Gymnocarpium robertianum*, and then one for Rolf to get excited about, a patch of *Botrychium lunaria*. On our way down, Martin Rickard found a cultivar, a very choice *Polystichum lonchitis*. Whilst Roger and I were trying to photograph sweeps of *Cystopteris montana* interlaced with *C. alpina*, the others were rushing to descend the mountain as thunder could be heard. We eventually found them sheltering in the cowshed discussing the next few days' weather with the farmer. Back at the hotel we met up with the rest of the party, who had travelled from Britain, Austria, France and Switzerland.

Friday 6th – Ramsau & Taubensee, Germany — Barry Colville

After breakfast we went in five cars to the car park (47°36′24.5″N, 12°53′15.8″E) at the west edge of Ramsau and joined the Mühlsteinweg. We walked on a good level track to the west, mainly through pine forest with a variable width of mixed forest alongside the path. Birch, oak, sycamore and hazel were the most common trees. The more open parts had a rich understorey, which was the best place to see ferns, orchids and very many other plants.

Around 11a.m. we moved a short distance to Taubensee and were starting another walk when Rolf rightly judged that the weather was going to become decidedly wetter and suggested an early lunch. We waited for the weather to clear before setting off again along a trail, firstly in forest and then in Alpine meadow, terminating at a waterfall (47°38′02.5″N, 12°51′20.0″E). It was difficult to approach the steep sides where the ferns looked decidedly interesting, as it meant either a steep climb over and above the waterfall or wading waist

deep through the plunge pool, so we were reduced to the use of binoculars or speculation to wonder what gems would have greeted us.

Ferns noted along the two trails included *Polypodium vulgare*, *Polystichum lonchitis*, *Asplenium viride*, *Athyrium filix-femina*, *Asplenium adiantum-nigrum*, *Gymnocarpium dryopteris*, *G. robertianum*, *Cystopteris fragilis*, *Asplenium scolopendrium*, *A. trichomanes*, *Dryopteris filix-mas*, *D. dilatata*, *D. remota*, *D. affinis*, *Selaginella selaginoides*, *Lycopodium annotinum*, *Polystichum aculeatum* and *Cystopteris montana*.

Saturday 7th – Eagle's Nest above Berchtesgaden, Germany **Martin Rickard**

Low cloud cover with rain in the air – perfect for our highest site visit of the trip! The Eagle's Nest above Berchtesgaden (47°36′46.2″N, 13°02′28.7″E) at 1,837 metres is famous as one of Hitler's idyllic hideaways. No views for us but we had a wonderful day amongst alpine flowers – and ferns! The plan was to catch a bus to the top and then walk down an old road on the north side of the mountain.

Dryopteris villarii, not known in Britain, was added to our list. It was very common in the limestone pavements and crags at higher altitudes, including right at the summit. Until relatively recently it had been confused with *D. submontana*. Perhaps fortunately, *D. submontana* does not grow in the region so there was no risk of any confusion for our group! *Cystopteris alpina*, recently added to the British flora based on Victorian specimens, was relatively common. It was also a pleasure to see several species rare to us in the UK that were common here, most notably *Cystopteris montana*, *Polystichum lonchitis* and *Lycopodium annotinum*. As we descended, *Polystichum aculeatum* became quite frequent, and Rolf was very pleased to be able to show us several plants of *P.* × *illyricum*, its hybrid with *P. lonchitis*. Many other typical lime lovers common on some of our UK hills were abundant, particularly *Asplenium viride*, *Gymnocarpium robertianum* and *Cystopteris fragilis*. Surprisingly, some species that I think of as calcifuges were recorded on this very limey mountain – most notably *Huperzia selago*, *Gymnocarpium dryopteris* (no potential hybrids with *G. robertianum* were seen), *Oreopteris limbosperma*, *Phegopteris connectilis* and one plant of *Athyrium distentifolium*, found by Paul Ripley. *Dryopteris expansa* was recorded but not confirmed.

The alpine flowers here were in some ways the stars of the day. Many could only be identified to generic level but my favourites were *Polygonatum verticillatum*, *Clematis alpina*, the charming, yellow *Viola biflora* and the delicate pink-flowered *Rhododendron hirsutum*, which was everywhere. In the late snow patches a *Soldanella* species was still in flower, as was a *Gentiana clusii*. I saw one plant of *Silene acaulis* and a stunning patch of *Trollius europaeus*; the almost equally beautiful *Anemone narcissiflora* was common.

Sunday 8th – Lake Königssee & near Obersalzberg, Germany **Roger Golding**

After breakfast we embarked on a boat down Lake Königssee. The lake is eight kilometres long and 200 metres at its deepest point, set in a dramatic glacial valley. As we set off, mist obscured the mountains, gradually dispersing over the next half hour. The captain entertained us to a running commentary in German, at one point stopping to demonstrate the echo by playing a flugelhorn. After letting off passengers at the old pilgrimage chapel of St Bartholomew, we carried on to the south end of the lake (47°30′42.8″N, 12°59′37.7″E) and walked to the end of the valley, past the small lower lake (Obersee) where the water was a beautiful turquoise green. On the way there and back we saw most of the local lime-loving ferns including ever-popular *Cystopteris montana*, surprisingly uncommon *Asplenium scolopendrium* and one or two more acid-loving species such as *Oreopteris limbosperma*. Although we didn't see any new ferns, it was a very beautiful lake trip and walk. We stopped for the obligatory coffee and kuchen, then made our way back via the boat.

Late in the afternoon Rolf took us to a wood not far from the Eagle's Nest, where he showed us *Cystopteris sudetica* at one of only two sites in Germany. Only a single plant could be found – apparently the population varies from year to year but is always small. It was quite a feat to find it as the woodland floor was covered with other small triangular-fronded ferns – both species of *Gymnocarpium* and *Cystopteris montana*.

photo: R. Thiemann

Lake Obersee, Germany

Peter Kreis, Martin Rickard, Avril Walkinshaw, Lindsey Holleworth, Paul Ripley, Bryan & Gill Smith, Heidi Kreis, Roland Ennos, Barry Colville, Roger Golding, Pat Acock, Yvonne Golding, David Walkinshaw, Rémy & Annie Prelli, Bridget Laue, Paul Sharp

Monday 9th – Karlstein, Weißbach & Rauschberg, Germany **Paul Ripley**

Our first site was at Karlstein (near Bad Reichenfall), parking near the footpath to St Pankraz church (47°43′11.4″N, 12°50′30.3″E). The Catholics in this part of the world could not resist placing a chapel on top of every available crag, and it was the limestone cliffs below this that we searched for (and found!) *Asplenium seelosii*. This small but distinctive fern grew with *Polystichum aculeatum*, *Cystopteris fragilis*, *Asplenium viride*, *A. scolopendrium*, and *A. trichomanes* subspp. *hastatum* and *quadrivalens*. We were assured that subsp. *pachyrachis* did not occur here.

Our next stop took us 500 metres beyond the church in the small village of Weiβbach (47°43′32.6″N, 12°45′44.3″E). By a path on the banks of a river was the largest stand of *Equisetum variegatum* in Germany, although the colony was much reduced as a result of tree clearance. Also here were *E. arvense*, *Dryopteris carthusiana*, *D. dilatata* and *Athyrium filix-femina*.

We parked for our main site in a car park below the road to the foot of the Rauschberg chair-lift (47°44′28.8″N, 12°40′03.8″E). The name of the mountain (Rauschberg) signifies a connection with the extraction of lead ore. As we walked up to the foot of the chair-lift we noted *Dryopteris carthusiana*, *D. filix-mas*, *D. dilatata*, *D. borreri*, *Athyrium filix-femina*, *Polystichum aculeatum*, *Lycopodium annotinum* and *Gymnocarpium robertianum*. It is one of the pleasures of this part of the world that one is never very far from refreshment and we duly took some at the nearby café. Returning to the car park, we then took one of the more difficult paths to the summit of the Rauschberg, passing the ferns already mentioned with, in addition, *Huperzia selago* and one small *Polystichum lonchitis*. We eventually found *Pteridium aquilinum*, which is uncommon here. Our target, however, was *Asplenium fissum* and we searched for it on the treacherous limestone scree. Just where Rolf had expected, we saw with delight many crowns of *A. fissum*, spreading out on loose limestone scree from

areas stabilised by moss. I have to confess that we were unable to resist a further refreshment stop on the way home.

Tuesday 10th – Near Kraubath, Austria **Gill Smith**

After breakfast we packed our cars and headed towards Kraubath in Austria – a small town close to the border with Slovenia. The journey took about 3.5 hours and we arrived at Gasthof Neumann just before 1p.m. It took a while for us all to be checked into our rooms and we reassembled over an hour later equipped for a hike up the northern side of a mountain about 2.5 miles south-west of Kraubath. We parked on the roadside (47°17′00.5″N, 14°50′54.1″E).

The terrain here is between the African and European plates so is largely serpentine with nickel, chromium and platinum deposits, although only chrome was extracted here. *Erica carnea* was growing all over the area. We followed a well trodden steep path upwards, finding along the way *Equisetum arvense*, *Selaginella helvetica*, *Dryopteris filix-mas*, *D. dilatata*, *Athyrium filix-femina*, *Asplenium ruta-muraria*, *A. viride*, *Pteridium aquilinum*, *Gymnocarpium robertianum*, *G. dryopteris*, *Dryopteris carthusiana* and *D. borreri*. Amongst the rocks were *Asplenium* × *poscharskyanum*, *A. adulterinum* and *A. cuneifolium*. At the top of the mountain we searched amongst the scree for *Notholaena marantae* without success. We took the same path back but it came on to rain heavily so we were all very wet by the time we arrived back at the cars. We decided that we would have to try the south side of the mountain the next day for the elusive *Notholaena*!

Wednesday 11th – Near Kraubath & Vorlobming, Austria **Bryan Smith**

Our plan was to cover the other side of the mountain that we had visited the previous day, climbing up and over the mountain and ferrying drivers back to their cars afterwards. Thus some cars were left at our last location and the rest were parked at 47°16′51.9″N, 14°55′34.9″E.

We scrambled over scree up a 60 degree slope through the woods and quickly found some excellent colonies of *Asplenium cuneifolium*, and continuing upwards came across more *Dryopteris filix-mas*, *Asplenium trichomanes* subsp. *quadrivalens* and *A. adulterinum*. About two-thirds of the way up the slope, rocky outcrops gave us our goal of *Notholaena marantae* and also the extremely rare *Sempervivum pittonii* – growing at one of its only two worldwide mountain locations. Unfortunately, it was here that a boulder upon which one of our group, Barry Colville, was standing gave way, resulting in him tumbling an horrific 30 to 40 metres down the steep, rocky slope. Miraculously, he was not seriously injured, but it did require a helicopter rescue and a week's hospital stay (the benefits of insurance certainly paid off). Some of our party came back down the way we had come, but others carried on over the mountain and an unplanned detour resulted in them seeing very large plants of *Equisetum sylvaticum*.

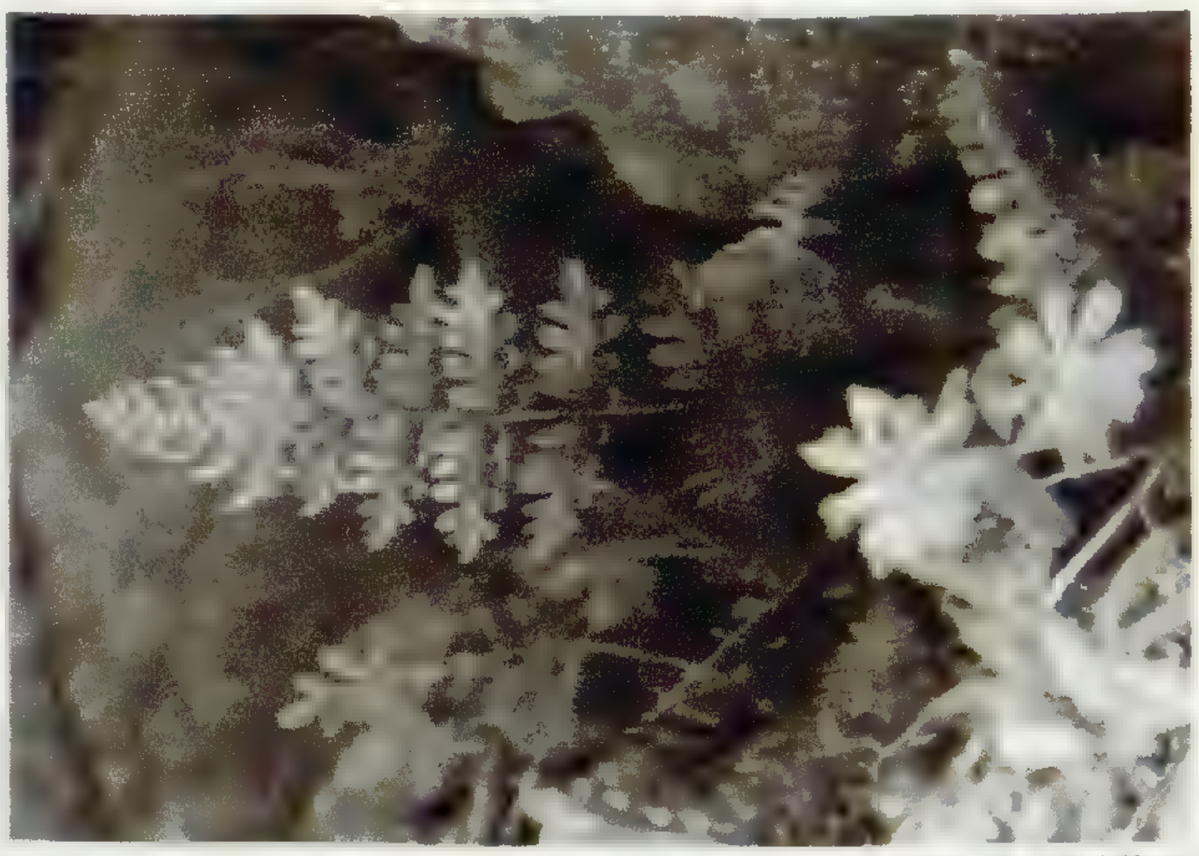


photo: R. Golding

***Notholaena marantae* near Kraubath**

Although still very shaken, we regrouped, and in the afternoon went to Vorlobming (47°17′42.0″N, 14°59′47.0″E). Here we walked up a track alongside a stream and tried our hand at distinguishing *Asplenium adulterinum* from *A.* × *poscharskyanum* (not always very successfully!) More readily identifiable ferns were noted, including *A. viride*, *A. trichomanes* subsp. *trichomanes*, *A. ruta-muraria*, *Athyrium filix-femina*, *Dryopteris carthusiana*, *Gymnocarpium dryopteris*, *Phegopteris connectilis*, *Polypodium vulgare*, *Equisetum arvense*, *E. pratense* and *Selaginella helvetica*. The find of the day by Rémy was a hybrid, which, following later examination of a specimen at BM collected by T. Reichstein, was thought could be *Asplenium* × *lobmingense*.

Thursday 12th – Deutschlandsberg & Mixnitz, Austria **Bridget Laue**

In the morning we visited the Lassnitz Nature Reserve (46°48′38.3″N, 15°12′08.4″E), near Deutschlandsberg, not far from the Slovenian border. This site, at a lower altitude (about 375 metres), on granitic schist and gneiss, presented a very different habitat from those we had seen recently. There had been heavy rainfall the previous night and it was still cool and damp. These mild, wet conditions were clearly conducive to *Polystichum* ferns. Walking alongside the river, we saw large numbers of *P. setiferum* (probably the largest colony in Central Europe) and *P. braunii*. This setting provided ample opportunity for generation of the hybrid between the two, *P.* × *wirtgenii*. There were also a few *P. aculeatum* and its hybrid with *P. setiferum*, *P.* × *bicknellii*. The other outstanding feature of the area was a large swathe of *Equisetum hyemale*. Other species near the trail included *Dryopteris filix-mas*, *D. borreri*, *D. dilatata*, *Gymnocarpium dryopteris*, *Phegopteris connectilis*, *Polypodium vulgare*, *Blechnum spicant*, *Athyrium filix-femina*, *Cystopteris fragilis*, *Asplenium trichomanes* (subspp. *trichomanes* and *quadrivalens*), *A. viride* and – a large colony in one spot only – *A. scolopendrium*.

photo: R. Golding

Polystichum braunii
at Lassnitz Nature Reserve

In the afternoon we drove north to Mixnitz (47°20′10.6″N, 15°22′23.9″E), to walk through the Nature Reserve along a tributary of the Mur River. Here the highlight was a 30-metre-high limestone cliff, with scattered examples of *Asplenium lepidum* growing in cracks where there was some, but not too much, moisture. We also saw *A. ruta-muraria* and *A. trichomanes* (subspp. *quadrivalens* and *inexpectans*), and a variety of probable *Asplenium* hybrids. Our list for this location also featured *A. viride*, *Dryopteris filix-mas*, *D. affinis* agg., *Polypodium vulgare*, *Cystopteris fragilis* and *Selaginella helvetica*.

Friday 13th – Adlitzgraben Gorge, Austria **Rémy Prelli**

This last day began in rain, but promised much interest. The morning was devoted to the limestone rocks of the Adlitzgraben, a gorge near Schottwien (47°39′33.6″N, 15°52′22.8″E), about 80 kilometres north-east of Kraubath. At an altitude of about 600 metres, the vegetation of the slopes comprised a mixed forest of beech (*Fagus sylvatica*), fir (*Picea abies*) and sycamore (*Acer pseudoplatanus*). The rain having stopped, we were able to follow a good length of the gorge on foot, allowing us to note the presence of *Asplenium ruta-muraria*, *A. viride*, *Cystopteris fragilis*, *Gymnocarpium robertianum*, *Polystichum aculeatum*, *Selaginella helvetica*, and everywhere an abundance of *Asplenium trichomanes*. The latter species was the object of particular attention, leading to the recognition, apart from the common subspecies *quadrivalens*, of plants corresponding to the subspecies *hastatum*, *inexpectans* and *pachyrachis*, very probably associated with their intraspecific hybrids. But the biggest surprise was the observation of several beautiful plants of *Asplenium lepidum*, which delighted Rolf.

After a meal taken in a local 'gasthaus', we travelled about 30 kilometres south-eastwards, reaching a village where on two old walls were found two plants of *Asplenium* × *clermontae*. Much photographed in spite of the reappearance of the rain, this hybrid is the result of a cross between *A. ruta-muraria* and *A. trichomanes* (subsp. *quadrivalens*). It is extremely rare, in spite of the frequent coexistence of its parents. Rolf explained that this *Asplenium* had been known a long time from this site, that the plants had at times been more numerous, and that the individuals we saw were probably the descendants of the original

plants. The product of two autotetraploid parents, *A.* × *clermontae* actually produces viable spores, which gives it a weak but real chance of reproduction. However, this ability remains extremely limited, and the realisation that we were in the presence of half the known European population of this exceptional hybrid was quite moving. The other two plants are in England (Northumberland) and in France (in the north of the Alps).

In the evening around the dinner table we said our goodbyes, as many were leaving early the next morning. More especially, Rolf, our illustrious host who had conceived and planned the trip with help from his wife Angelika, was presented with a few gifts and an official and many informal votes of thanks for a most excellently planned trip.

photo: Y.C. Golding

Rolf Thiemann opening his presents on the last night

Saturday 14th – Conclusion **Pat Acock**

On the way to the airport some of us went back to Vorlobming so those that had missed this valley could see the interesting aspleniums.

We owe Rolf a huge debt of gratitude; he had spent many days over a number of years planning this excursion, and the whole affair was beautifully balanced, with very varied terrain as well as different subsets of ferns each day so that you never knew what extra little gem Rolf had in store. I doubt that a better arranged tour could have been thought out. When Rolf and I were discussing it a few years back he told me that he believed this was the most beautiful part of Germany and I can certainly concur.

HEXHAM, NORTHUMBERLAND – 21-23 September

Friday 21st – Cawfields & Walltown **Pat Acock**

Twenty members and friends assembled north of Haltwhistle at Cawfields car park (35/713665). Our leader, Rob Cooke, introduced us to John Richards, BSBI vice-county recorder for South Northumberland, who had helped with the planning of the meeting. We headed eastwards under Cawfield Crags and the north face of Hadrian's Wall. Here the Dolerite rock that had shattered from the Whin Sill escarpment lay treacherously around our feet. This site had probably not been botanised before and John had sought permission from the land-owner. We were pleased to record 12 fern taxa: *Cryptogramma crispa*, *Gymnocarpium dryopteris*, *Huperzia selago*, *Athyrium filix-femina*, *Blechnum spicant*, *Polypodium vulgare*, *Pteridium aquilinum*, *Dryopteris dilatata*, *D. filix-mas*, *D. borreri* and a *D. cambrensis* that was confirmed by Roger Golding. Of note was *Polypodium* × *mantoniae* at 35/7199.6684, which was subsequently confirmed by Bruce Brown.

After lunch back at the car park we walked around the old quarry and eastwards along the south side of the Wall to Thorny Doors, adding *Asplenium ruta-muraria*, *A. scolopendrium*, *A. adiantum-nigrum*, *A. trichomanes* subsp. *quadrivalens* and possibly *Dryopteris oreades* to the ferns of the morning.

Mid-afternoon we headed three miles westwards to the Hard Rock Trail at Walltown Quarry (35/668658), where John showed us an *Ophioglossum vulgatum* site. We found seven patches on the old quarry floor that were unusual in having a small basal frond, long stipes and normal fertile spikes, many of which were just reaching maturity. Ten per cent of the plants were paired, with the tongues facing each other, more like *O. azoricum*. On a slope just above the quarry floor was a more normal-looking patch. The group split

at this stage, the majority going to see a nearby site for wild chives, *Allium schoenoprasum*, while a few people drove along the military road, admiring the Wall and the Vallum (an earlier pre-Wall double ditch defence earthwork).

Later on, most of us gathered for a meal at The Hadrian Hotel in Wall, which proved more convenient for most than the Hexham venue of the previous evening.

photo: A.M. Paul

***Ophioglossum vulgatum* site at Walltown Quarry**
Paul Ripley, Martin Rickard, Katherine Tonge, Dawn Isaac, Pat Acock, Bruce Brown, Rob Cooke

Saturday 22nd – Bellingham: Hareshaw Linn & Roughside Moor **Bryan Smith**

A bright morning saw us gather at Hareshaw Linn car park (35/839834) in Bellingham, where we were joined by around 15 members of the Natural History Society of Northumbria. The BPS had previously visited this site in 2000, so it was an opportunity for us to note any changes. In the mid-1800s the site had raged with the noise and smoke of iron production including two blast furnaces, but now it is an SSSI with a pleasant one and a half mile walk up a wooded gorge to a waterfall. Ferns were in abundance, and we soon found *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris dilatata*, *D. filix-mas*, *D. borreri* and *Polypodium vulgare*. Carrying on up towards the waterfall, we added *Asplenium scolopendrium*, *Gymnocarpium dryopteris*, *Phegopteris connectilis*, *Polypodium interjectum*, *Oreopteris limbosperma*, *Pteridium aquilinum*, *Equisetum arvense*, *E. sylvaticum* and a very foliose form of *D. borreri* with some cresting. Opposite an oak tree laden with *Polypodium vulgare*, torches revealed patches of *Trichomanes speciosum* gametophyte in recesses of a small cave. However, the real treat awaited us at the magnificent waterfall (Linn). The rocks leading up to the Linn were covered with *Cystopteris fragilis*, *Polystichum aculeatum* and *Asplenium trichomanes* subsp. *pachyrachis* - indeed, this was the only form of *A. trichomanes* to be seen. Compared with the 2000 visit, we didn't see any *A. trichomanes* subsp. *quadrivalens*, but *E. arvense*, *P. interjectum* and *T. speciosum* gametophyte were all new records.

In the afternoon, we searched for a *Hymenophyllum* hybrid to the west of Bellingham in Kielder Forest. After driving to the edge of the wood at 35/750829 (passing a magnificent stand of *Equisetum telmateia* on route), we walked about two miles along a forest road to rocky outcrops on Roughside Moor (35/734838). Time was short and a hurried search revealed no filmy ferns, not even *H. tunbrigense*, which had been previously recorded here. However, we did see *Blechnum spicant*, *Dryopteris carthusiana*, *D. dilatata*, *D. cambrensis*, *Equisetum arvense*, *E. palustre* and *Oreopteris limbosperma*. So, all in all then, a magnificent day's fern tally in this lovely countryside. [Megs Rogers subsequently reported that in November the NHSN Botany group found patches of *Hymenophyllum tunbrigense* on Roughside Moor on the bottom of crags near a small patch of conifers. Were we looking at the same crags?!]

Sunday 23rd – Allenheads **Sue Dockerill**

We assembled by a side road near Allenheads (35/850464). The hills all around were a good example of northern upland heath, part of the extensive Allendale Estate and used mainly for grouse shooting and sheep grazing. Looking around the immediate vicinity, an extensive colony of *Equisetum palustre* mixed with some *E. arvense* was found near the East Allen River and we were shown by John Richards a good patch of *Lycopodium*

clavatum on a nearby heathery bank. Other examples of upland flora were the mountain pansy (*Viola lutea*) and grass of Parnassus (*Parnassia palustris*), both showing some welcome flowers despite the lateness of the season.

We then set off up the well made path in a south-westerly direction. A steady climb for 45 minutes through apparently pteridophyte-free terrain brought us to a site with a wealth of clubmosses (35/827446). This was close to the top of the ridge where the ground flattened out and the heather was shorter and the ground stony and therefore fairly well drained. Here were many colonies of *Lycopodium clavatum* and *Diphasiastrum alpinum* growing in the barer areas, amongst the heather and regenerating in the burnt patches. *Huperzia selago* was also found, though in more isolated groups. But the main delight of the site was two potential plants of the rare *Diphasiastrum* × *issleri* (at 35/8276.4462). A sample of one of these plants had previously been sent to Fred Rumsey for identification, and he had agreed that it was not *D. alpinum*, but could not positively identify it as the hybrid. A further sample, ideally fertile, had been requested, and a suitable small piece was taken for analysis. In the meantime, this should be recorded as *D. cf.* × *issleri*.

photo: A.M. Paul

John Richards & Bryan Smith near the East Allen River

After a picnic lunch, our final visit was to a roadside verge (35/794444) about three miles south-west of our original meeting spot. Again, this was close to the top of the ridge, but in a small saddle and straddling the border between Northumberland and Cumberland. Large patches of *Gentianella amarella* that were still in flower caught our attention first, but we soon spotted masses of *Selaginella selaginoides* coning on the east side of the road, and a few small plants of *Huperzia selago*. In this bank *Botrychium lunaria* had been reported and one fast-fading stem was found amongst other upland heath plants such as *Vaccinium vitis-idaea* and *Rubus chamaemorus*, while further along several patches of *Mimuartia verna* flourished. Here was Northumberland heath in miniature and abundance, a very suitable end to our visit. After thanking John Richards for sharing his knowledge and guiding us to such interesting sites, and Rob Cooke for organising the meeting, we made our way home.

photo: B.D. Smith

Looking for *Botrychium*

Roger Golding, Sue & Brian Dockerill, Dawn Isaac, Alison Paul, Megs Rogers

LECTURE MEETINGS AND DAY VISITS

AGM & SPRING MEETING, NATURAL HISTORY MUSEUM, LONDON – 14 April

Barrie Stevenson

Within many clubs and societies the AGM is a lacklustre, lumbering occasion, almost inevitably poorly attended by members. The BPS has wisely avoided this situation, however, and the necessary business of the AGM has become an increasingly streamlined affair, so that the rest of the day can be devoted to a carefully chosen and varied programme. The Spring Meeting began in the comfortable surroundings of the Department of Palaeontology. After coffee, members dispersed in three groups to various areas of the Museum, avoiding the crowded public galleries. Our route took us through a seeming maze of corridors, staircases and lifts, with occasional glimpses of roof-scapes or sudden views of Cromwell Road.

Three displays had been organised on our behalf, and in turn each group visited all of these. I happened to be a member of the group ably led by Alison Paul, and can only assume that my impressions of all I saw were similar to those of other groups. We began at the NHM Botany Library where a display of books with printed illustrations was shown by Special Collections Librarian, Paul Cooper. On display was a group of volumes that had been selected from the library by Andrea Hart, Special Collections Librarian responsible for the Botany Library, as fine examples of printing techniques used in botanical illustration. Included were such treasures as one of the earliest books in the Collection, the three-volume Herbarium of Otto Brunfels, published in 1536-1540, the artist drawing from nature rather than from the drawings of his predecessors. Several fine volumes pertained to ferns, the earliest English example being James Bolton's *Filices Britannicae*, 1785. An amateur artist, he made careful drawings and engraved his designs on copper plates that were printed as illustrations for his book. On show were one of his original drawings and the resultant copper plate. Victorian volumes included the lavishly illustrated *Book of Choice Ferns for the Garden, Conservatory and Stove* by George Schneider, three volumes, 1892-1894. However, the finest printed illustrations in a Victorian fern book appeared in Thomas Moore's *Ferns of Great Britain and Ireland*, 1855-56. The 51 plates were nature-prints by Henry Bradbury and the copy on show was the sumptuous folio edition.

Our next visit was to the Angela Marmont Centre in the Darwin Centre, where Michael Hayward had arranged a vast and highly specialised display demonstrating the history of nature-printing. Having discovered the Thomas Moore volume illustrated by Bradbury, Michael had decided to research the earlier history of nature-printing. He was amazed to discover that early experiments were taking place in the late 18th century, and by the early 19th century nature-prints were made to decorate the margins of floras. A lightly inked leaf and flower was chosen to illustrate a specific description, the specimen placed inked face down on the page and gentle finger-tip pressure applied to a sheet of paper placed upon the specimen. This relief-printing method was ultimately used in Germany to produce large pages of garden flowers, the prints enhanced with water-colour washes and the bound pages sold commercially. However, it was impossible to use a specimen more than once by this method, and a further sophistication, invented in Vienna by M. Auer and introduced in this country by Henry Bradbury, was to make a mould of the plant specimen from which an electrotype printing plate was produced. Fern fronds proved to be ideal subjects, and plates were prepared for printing with coloured inks. Thomas Moore's *Ferns of Great Britain and Ireland*, with Bradbury's nature prints, is therefore illustrated with exact replicas of fern fronds, not only in colour but also in texture, with details such as sporangia and even scales clearly visible.

Our final visit was to the Historical Collections Room, also in the Darwin Centre. Mark Spencer, a Senior Curator in the NHM Botany Department, explained that the internal atmosphere was at a constant level of 17 degrees C and 40% relative humidity to protect the contents, including herbarium albums of Sir Hans Sloane (1660-1753). Sloane bequeathed his entire collection of plants, animals, antiquities, coins and other curios to become the Founding Core of the British Museum, the natural history items being moved to South

Kensington in 1881. The herbarium is contained in thirty-three-and-a-half albums, which are individually housed in transparent-fronted cases along one wall in the manner of Roman catacombs. Several albums were at least a foot thick with the contents running into hundreds of dried specimens of plants. The pages of the albums were turned and while discussion took place about the correct labelling and naming of the ferns, I was so amazed to see such survivors that I began to wonder how the specimens were fixed to the pages; in one album they were, in fact, laboriously sewn onto the pages with tiny stitches, the thread knotted carefully on the reverse of the pages. The Rev. Adam Buddle's herbarium (1692-1708) is one of the earliest British collections to give localities and I noted that some plants had been collected on Hounslow Heath, an area that has now largely disappeared under Heathrow Airport.

We returned to the Department of Palaeontology to eat lunch, chat with friends, look at the extensive display of BPS merchandise, hunt through the vast selection of ferny books, both old and new, all at competitive prices on the BPS Booksales tables, select free packs of fern spores and queue up to buy a signed copy of Sarah Whittingham's splendid book, *Fern Fever*.

Then followed the AGM (reported separately) and a refreshment break before Martin Rickard talked about 'Fern Nurseries and their Catalogues'. Though often considered mere ephemera, they offer an amazing insight into the stocks of ferns available in the late Victorian period. Many were tender specimens aimed at the Head Gardeners of the landed gentry, whose underlings stoked the stoves that kept their tropical glasshouses frost-free, but also offered were cultivars of every description, many of which have now disappeared without trace.

Martin also showed photos taken in the High Andes in Ecuador. The rest of his party were looking for wild birds. Not surprisingly, Martin managed to slip away in order to photograph ferns, and his Cloud Forest studies of lush filmy ferns and the tallest trunked blechnums I have ever seen must have made his trip worthwhile.

This was a splendid Spring Meeting, and our sincere thanks go to Patrick Acock for organising such a pleasing programme, and also to Alison Paul who, unobtrusively but highly efficiently, looked after our 'domestic arrangements' (her own phrase), including not only providing chocolate biscuits but also ferny paper napkins.

AUTUMN MEETING, NATURAL HISTORY MUSEUM, LONDON – 17 November

Fred Rumsey

The idea for the theme of this meeting – 'Molecules, chromosomes and hybrids; demystifying current fern research' – had originally come from Andrew Leonard and it was good to see him and about 30 other members in the Darwin Centre of the Natural History Museum for what proved to be a very thought provoking and enjoyable day – many thanks to Alison Paul for her help in arranging and setting things up.

Mary Gibby started the meeting with a very personal account of her research to elucidate the role of hybridisation and polyploidy in the genus *Dryopteris*, with particular reference to her work in Macaronesia and the British Isles. She introduced us to the pioneering work of Irene Manton on fern cytology – the study of the plant's chromosomes, which led to the recognition that many ferns that we had considered to be single species, or minor forms of them, were actually more properly recognised as several distinct species because they had differing numbers of sets of chromosomes. By examining the behaviour of chromosomes when plants were artificially hybridised it became possible to speculate on these species' mode of origin and to identify their likely progenitors. She showed us that several of our commonest species, such as *Dryopteris dilatata*, had arisen following hybridisation and the subsequent duplication of their chromosomes, her work suggesting the parents in this case were likely to be the northern diploid *D. expansa* (then known as *D. assimilis*) and the Azorean endemic *D. azorica*, itself genomically indistinguishable from the North American *D. intermedia*. Several other cases were shown, and the interesting and at times apparently paradoxical current distributions of the Macaronesian taxa and their relatives were to find echoes and be the subject of discussion in later talks using more recent DNA-based approaches.

Mary was followed by Fred Rumsey with a talk on 'Understanding apogamy'. He presented a simplified account of this rather complex reproductive process, adopted by a small but significant number of ferns, in which plants still produce spores but not by a sexual process. Building on what Mary had described, hybridisation and chromosome behaviour being central to any explanation of apogamy, he looked at the two different mechanisms by which apogamy occurs, the Böpp-Manton and the Braithwaite schemes – named after their describers. Having looked at the mechanism by which these plants reproduce and which fern genera had adopted them, he went on to consider briefly the difficulties that such systems posed for those who have to produce workable taxonomies, floras and identification guides… – summed up as 'the *affinis* problem'! Again the evidence of this was to be picked up in later talks.

Mark Carine (a researcher at the NHM), immediately pandering to one member of the audience by referring to *Polypodium australe*, went on to describe the work he has been doing using chloroplast DNA sequences to investigate the relationships of the diploid polypodiums within Macaronesia and the adjacent continents. Plants from the different archipelagos have been variously treated at ranks from species to varieties – if recognised at all – and have often been sunk into the continental *P. cambricum*. Mark showed us that each archipelago supported genetically distinct plants and that far more variation existed there than in mainland Europe. The identity of a controversial specimen of '*P. macaronesicum*' from southern Spain was established, its affinities being with Azorean samples, and the interesting biogeographical implications this might have were discussed.

Fred then presented work that he had been doing on the back of a citizen science project teaching identification alongside molecular techniques to schoolchildren. The aim was to produce a DNA Barcode for each member of the UK fern flora, including hybrids and naturalised aliens. Comparatively recently specific DNA regions (loci) had been identified by an international consortium as markers of choice for this barcoding process. Our primary goal was to test the utility of these markers against a particular plant group (the British ferns) where we anticipated that there might be difficulties because of the preponderance of polyploidy, reticulate evolution, apogamy and the resulting critical taxa. We also hoped that DNA investigations might help to resolve some long-standing identification problems where morphology alone has struggled. It was particularly pleasing to be able to present results here as so many members of the audience had helped by sending material for sampling. One of the selected markers, MatK, failed to amplify for a significant proportion of the species and the other, rbcL, being more conserved, often failed to discriminate between species. As a taxonomist, Fred was relieved that he wouldn't be out of a job as a consequence of automated DNA readers any time soon! Although disappointing in many areas, it was pleasing to note that one or more marker(s) did discriminate between some difficult to separate taxa, e.g. *Ophioglossum vulgatum* and *O. azoricum*, and also supported the recognition of *Cystopteris dickieana* as distinct from *C. fragilis*.

John Edgington then updated us on fern finds in London, with all manner of treasures discovered since he spoke to the Society at the April 2011 AGM. Some members had been lucky enough to take part in a ramble to see some of these later that year and thus the revelation of such rarities as *Asplenium septentrionale* only elicited mild gasps. Amongst other natives found here for the first time were *A. obovatum* subsp. *lanceolatum* – on the damp brickwork of a warehouse by the canal just north of King's Cross, and an array of aliens including the thermophilous *Pteris tremula* surviving on the terrace of Somerset House.

We concluded in the lecture theatre with Pat Acock talking about *Equisetum*. He led us through the genus and outlined the more frequent hybrids and some of the pitfalls and difficulties in trying to identify them. This was to prove a good scene setter for our afternoon practical session held in the Angela Marmont Centre where we would look at herbarium and fresh material of a range of fern hybrids with the hope of familiarising more people with the sort of characters to look for when trying to identify them. Rob Cooke had kindly provided some *Polypodium* fronds of each of the known UK hybrids and Andrew Leonard provided other fresh material. The meeting concluded with beverages, biscuits and a lot of chatting, a nice end to what had been a very successful day.

REGIONAL MEETINGS

BOTANICAL CORNWALL GROUP

Ian Bennallick & Matt Stribley

Most trips for 2012 had a general recording aim, but those days with particular fern interest are reported below. The under-recorded areas of Bodmin Moor were particularly targeted.

Trewortha Tor (20/2575), Bodmin Moor, East Cornwall – Sunday 15 July

A sunny day greeted eight members as we met at the end of the minor road at Twelve Men's Moor west of North Hill. The intention was to record in some under-recorded one-kilometre squares (monads), and also to update *Hymenophyllum tunbrigense* and *H. wilsonii* records for Trewortha Tor, a classic Bodmin Moor 'tor' with rounded granite outcrops and plenty of crevices and overhangs. A traipse through a bog had most of us just dodging the pools and pits, but Matt Stribley managed to find a few *Osmunda regalis* plants beside the stream at 20/256758. Despite this fern being relatively widespread and sometimes locally abundant in suitably wet woodland, cliff flushes or inland moors in Cornwall (recorded from 703 monads in total, including 490 after 1999), it is not common in south-east Cornwall or this part of Bodmin Moor.

After lunch, enjoyed in a sheltered spot below a granite rock, we started searching methodically along the ridge. Three of the more agile members split off from the main group and searched most of the rocky terrain. The type of place to find *Hymenophyllum tunbrigense* is subtly different to places where *H. wilsonii* can be found, as it usually favours damper and darker recesses between the granite boulders – a torch is useful! Sheets of *H. tunbrigense* can be seen in places, and along the tor we found it in at least three separate sites, including 20/2466.7587 and 20/2454.7588. *H. wilsonii* was found in more open situations on the edges of mossy granite boulders in at least eight places, including 20/2440.7575 and 20/2405.7568, sometimes growing with *H. tunbrigense*. Whilst peering down a dark crevice at 20/2466.7587, Matt Stribley found a small patch of *Trichomanes speciosum* gametophyte; this is undoubtedly under-recorded in Cornwall. In a somewhat surprising situation at 20/2438.7574 – along a crevice between rocks, was a good patch of *Dryopteris aemula*, which can often be found in small numbers on a few high windswept granite tors. Coming down off the tor, we searched along the Withey Brook, a swift flowing stream, and found *Oreopteris limbosperma* to be common on the banks at 20/2567.7590, with abundant *Athyrium filix-femina*. We walked back through Trewortha, a huddle of farm buildings in the open moorland landscape, and noted *Asplenium scolopendrium*, *A. adiantum-nigrum* and *A. trichomanes* subsp. *quadrivalens* on granite walls at 20/2414.7530.

Kerrow Downs (20/1174), Bodmin Moor, East Cornwall – Sunday 29 July

Nine members met at a lonely crossroads at Kerrow Moor (20/115749) in the western part of Bodmin Moor, on a very steely grey morning with cold blustery winds and rain threatening – a typical July day! The main aim was to check a bog at Carwen Pool, where Paul Gainey had found good numbers of bog orchid, *Hammarbya paludosa*, in 1995. As we walked west towards Pendrift Downs the weather improved and the sun came out, the wind dropped and we even had to take coats off! Near Carwen Pool (20/1104.7428) in a well grazed area of moor (ponies, cattle and sheep were all nearby, as well as rabbits) we searched diligently for the bog orchid in Paul's spot, a very nice habitat full of sundews (both *Drosera rotundifolia* and *D. intermedia*) and pale butterwort (*Pinguicula lusitanica*), but without success. However, Carwen Pool was well vegetated, with dominant *Equisetum fluviatile* and some *Osmunda regalis* around the edge. Walking south along a footpath through moorland, then over a carpet of chamomile (*Chamaemelum nobile*) in damp fields at Higher

Carwen, we made our way through the farm at Carwen, and as Matt Stribley loitered in the gateway he spotted a good patch of *Asplenium obovatum* subsp. *lanceolatum* in a granite stone hedge at 20/11047394. A little further on at Higher Metherin at 20/11607410 Ian Bennallick found several plants in a similar granite stone hedge habitat in the lane to the farm. Both sites are new monad records in this western part of Bodmin Moor, but add to a general scatter of sites here, concentrated around Blisland and St Breward. *A. obovatum* subsp. *lanceolatum* occurs rarely around the edges of Bodmin Moor and may have been overlooked in the past. Farms or hamlets either in the inland granite areas of Cornwall or where hedges have been built with granite are worth checking for this species as it appears to be characteristic of such places, favouring the crevices between the granite stones in the wall. In a shaded roadside lane a little further west, Matt also found some large-fronded plants of *Dryopteris aemula*, showing that where the conditions are right it can attain quite a size. Ian showed how the more triangular frond shape and distinctive upturned pinnule teeth of *D. aemula* (giving it a 'crispy' look) contrasted with the similar *D. dilatata* with which it was growing. Further east along a wet roadside bank between Treswigga and Carbaglet (20/123735) there was particularly luxuriant *Oreopteris limbosperma* growing with *Athyrium filix-femina*.

Park Pit (20/1970), Bodmin Moor, East Cornwall – Saturday 29 September

Background

Park Pit (20/1970), north of St Neot in the southern part of Bodmin Moor, is an area owned by South West Water (SWW). Up until 2007 it was a 'moonscape' of waste china clay workings, but in the last five years it has been sculpted and has revegetated into an area rich in wildlife. On the 5th September, whilst surveying part of the site that had vegetated naturally, a local consultant botanist, John Sproull, came across what he thought was a clubmoss. Next day he e-mailed Ian Bennallick (the BSBI recorder for East Cornwall) a grainy photo of his find, which Ian recognised instantly as *Lycopodiella inundata*. Ian was at Park Pit within a couple of hours! Having easily found the site (20/198703 and 20/199703) he located *L. inundata* growing on a flat and waterlogged 'mica dam', an area where mica, a by-product of the china clay mining, had settled out over time and then dried and vegetated naturally, mostly with patchy heather (*Calluna vulgaris*) and purple moor-grass (*Molinia caerulea*), with a few round-leaved sundew (*Drosera rotundifolia*). The substrate formed by the mica holds surface water readily and open areas in between the heather appear to have kept relatively vegetation-free over the years due to periodic inundation. It was in these open areas that the *L. inundata* was growing and sporing abundantly. Ian methodically recorded the *L. inundata* plants in ten metre by ten metre squares; the population was estimated to be between 1,820 and 3,620 plants (based on approximately 50 to 100 plants per square in 36 squares, and just a few plants in five squares). It was difficult to say for sure how many 'separate' plants were present, but it is a fantastic colony covering many square metres. Though recorded historically at scattered sites in Cornwall, *L. inundata* had only been recorded at one (Retire Common 20/0063) since 1973 (when a second recent site at

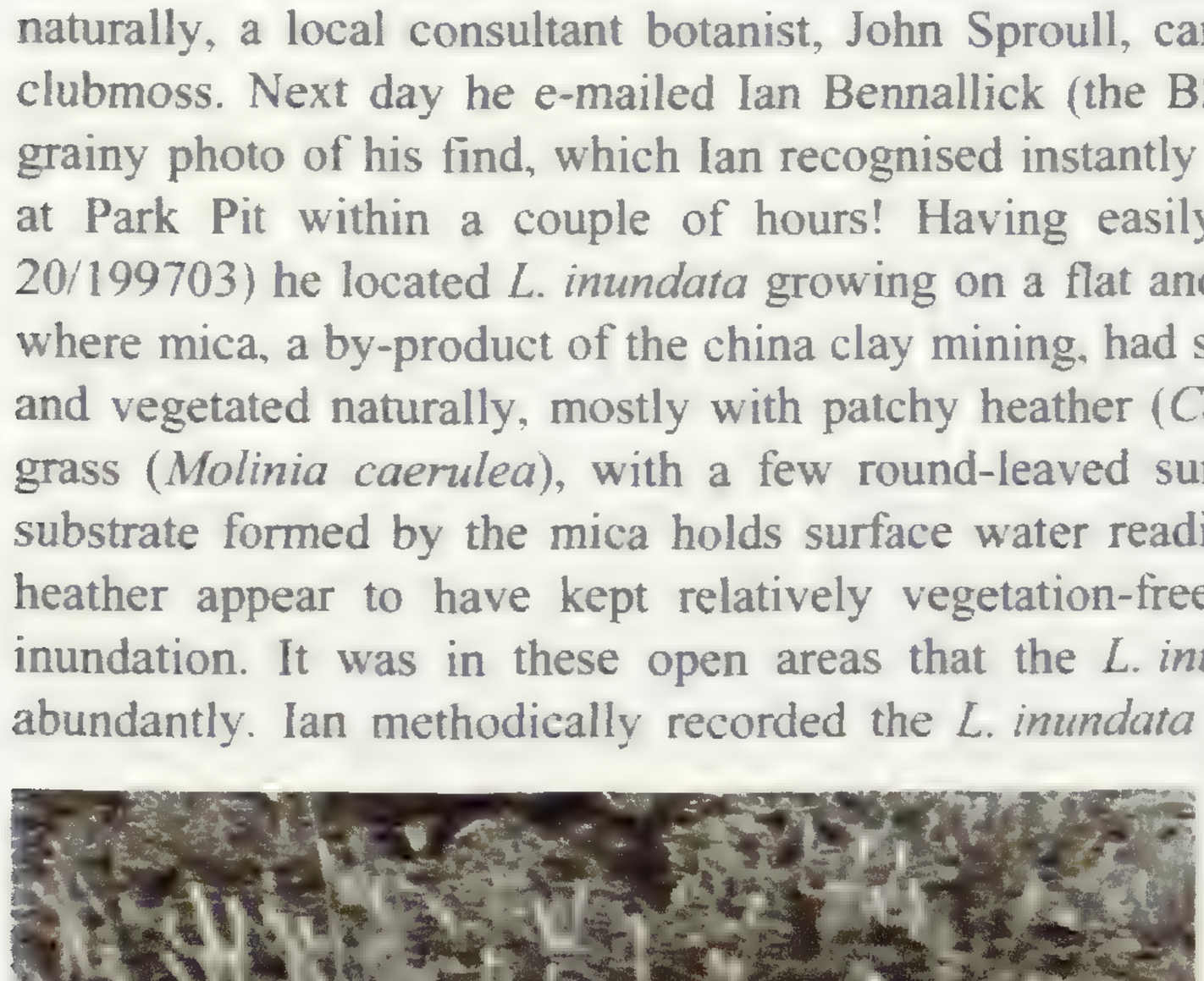


photo I.J. Bennallick

***Lycopodiella inundata* – Park Pit, Bodmin Moor**

Carbis Moor 20/0255 was destroyed). Despite the introduction of cattle grazing in 2007, it appears to have declined at Retire Common from at least 1977 (then recorded as abundant) up to 2008 when it was last found; no plants have been seen since, despite repeated searches.

A bonus was that when recording on a drier part of the dam, Ian noticed the silky spreading shoots of *Lycopodium clavatum* just a few metres away amongst a carpet of heather. Two separate patches were found (20/1993.7034 and 20/1987.7028), each with many sporing cones and covering about two metres by two metres. This was a most unexpected find as this particular species had been considered extinct in Cornwall due to there being no substantiated records since 1933 (in fact there are not even any early herbarium specimens of *L. clavatum* from Cornwall). Interestingly, a record was made for the 'Upper Fowey Valley' in 1984 but without a detailed location or any other notes, and this had been treated with suspicion. Park Pit is in the Upper Fowey Valley so it is possible that this was the 1984 site.

BPS meeting

With the permission of SWW, a hastily arranged visit of five members was made on the 29th September and many photos of the habitat and both species were taken. Photos can be seen on David Fenwick's website:
www.aphotoflora.com/clubmoss_lycopodiella_inundata_marsh.html, and
www.aphotoflora.com/clubmoss_lycopodium_clavatum_stags_horn.html.
Around the edge of the mica dam several plants of *Dryopteris carthusiana*, *Osmunda regalis*, *Oreopteris limbosperma*, some fine *Blechnum spicant*, *Dryopteris affinis* and possibly *D. cambrensis* were recorded.

The colonies of *Lycopodiella inundata* and *Lycopodium clavatum* at Park Pit have shown that it is worth searching open 'pioneer' sites, of which there are many in Cornwall created from mining works, especially in the china clay area, in case there are other populations of these clubmosses in Cornwall.

EAST ANGLIA

Indoor meeting, Little Thurlow, Suffolk – 28 January **Tim Pyner**

Twenty-three members gathered at Mary Hilton's house for our regular winter indoor meeting. We were very fortunate to have BPS General Secretary, Yvonne Golding, as our speaker and she gave a fascinating account of her trip to the Chinese state of Yunnan in search of ferns. She explained how the trip evolved from an initial contact with Professor Xiao Cheng at Kunming Botanical Institute to a full-blown expedition, including both professional and amateur pteridologists, to some of the most ferny areas of the state. Her photos and commentary on the ferns, people and places really captured the feel and culture of the places visited and left everyone eager for the opportunity to take part in any future visits. A more detailed version of the talk has since been published in the 2012 issue of the *Pteridologist*.

I would like to thank both Yvonne for preparing and presenting an excellent and entertaining talk, and Mary Hilton for hosting another superb meeting.

Essex: Oasis Exotic Garden, South Benfleet; Pound Wood, Daws Heath; Tim Pyner's garden, Southend-on-Sea – 16 June **Barrie Stevenson (a.m.) & Martin Rickard (p.m.)**

For their annual joint meeting a total of 19 members drawn from both South-East and East Anglia Regional Groups met at South Benfleet, Essex, to visit Oasis Exotic Garden. Hidden from surrounding buildings by a belt of trees, the south-facing site on a one-in-five slope would daunt most gardeners. Twenty-five years ago Paul Spracklin saw the potential to adapt this hillside area into a garden supporting plants able to survive low rainfall (around 500 millimetres annually) but with fairly mild winters (–7°C was the previous winter's lowest temperature). The garden has become well known for its range of Mexican

photo: A.M. Paul

succulents such as *Agave* and many mature cacti growing in desert-like conditions, the free-draining soil top-dressed with clinker waste from a local power-station to replicate rocks and coarse sand. As we wandered uphill along winding paths, we found well established specimens of ferns fully exposed to dry conditions, though often in the shelter of rocks. These included *Pellaea atropurpurea*, *Asplenium ceterach*, various *Cheilanthes* species and a superb specimen of *Polypodium scouleri*. Paul has even managed to establish *Polystichum lonchitis*, a difficult plant to grow in the south; here it was thriving in a sheltered crevice.

However, Paul also wished to grow other ferns, which presented an even greater challenge. He increased the shelter belt with the addition of bamboos, palms and evergreen shrubs, particularly around the lower slopes of the garden, and prepared pockets of suitable compost for a vast range of ferns to enjoy the damp conditions and shelter vital to their survival. His success was apparent in the splendid stands of tree ferns, including *Dicksonia antarctica*, *D. fibrosa* and *Cyathea medullaris*. Some of the hollows were flooded to provide shallow ponds, at the margins of which were robust specimens of *Dryopteris cycadina*, *Matteuccia orientalis* and *Osmunda regalis*. Nearby, good specimens of *Adiantum aleuticum*, *Blechnum magellanicum* and *Cyrtomium falcatum* along with various *Polystichum* and *Pteris* species produced the jungle-like aspect to this area of the garden that Paul was intent upon achieving as a direct contrast to the upper slopes.

Oasis Exotic Garden, Essex

Bryan Smith, Jude Lawton, Pat Acock, Peter Clare, Michael Radley, Paul Spracklin

Paul kindly provided welcome refreshments, and in thanking him for allowing us to share his garden, we must remind ourselves that it is possible, against all odds, to create a dream garden even in the most unpromising conditions.

After a picnic lunch we visited an important area of ancient woodland, Pound Wood (51/816888), an Essex Wildlife Trust reserve in Daws Heath. The aim was to try and relocate *Equisetum sylvaticum* and *Ophioglossum vulgatum*, last seen here in the 1990s. Sadly, as feared, the area where they had been recorded had become seriously overgrown and we drew a blank. Apart from the standard woodland ferns (*Athyrium filix-femina*, *Dryopteris dilatata*, *D. filix-mas*, a few *D. borreri* and plentiful *Pteridium aquilinum*) we did stumble across a few plants of *Dryopteris carthusiana*.

This had been a very pleasant walk in fine weather so the group were ready to move on to Tim Pyner's garden in nearby Southend-on-Sea, where fabulous refreshments were waiting for us prepared by Beverley and her band of helpers, Denise and Becky. Tim's garden is neat and not very large but the shadier end section is densely packed with ferns – not run of the mill taxa but mainly species rarely seen elsewhere. I say species, because Tim's taste is not perfect – he does not like cultivars! Some of us are working on him to turn this unsatisfactory situation around! [No chance! Tim]

Tim had a well written article on his garden in the *Pteridologist* in 2009 with an update in 2010. He also recently had an article on *Blechnum* published in the RHS journal, the *Plantsman* (New Series Vol. 11, Pt 1. March 2012). Because space is limited I do not want to duplicate ground covered in these articles, there are, however, many other ferns not mentioned.

Those that particularly caught my eye were a fabulous specimen of *Pyrrosia polydactyla*, *Drynaria sinica* (ex Alan Ogden via Clive Brotherton) and an enormous *Polystichum* × *maderense*. *Dennstaedtia glauca* was especially interesting to see as it is new to our gardens.

Many thanks to Tim for organising a varied programme for the day and for his generous hospitality.

Arger Fen, Horringer Manor & Willow Cottage, Cowlinge, Suffolk – 7 July

Tim Pyner

On a showery day twelve members met at Arger Fen near Assington (52/930353), a Suffolk Wildlife Trust reserve. We were shown around this area of ancient woodland, which is recovering from coniferisation during the 1950s, by the warden, Mick Miller, who was a mine of interesting local information. Acid sands and gravels overlay boulder clay and the varied topography has allowed an interesting flora to develop. Immediately on entering the wood Mick showed us an extensive colony of *Polypodium vulgare* growing on an ancient woodbank (52/9303.3526). Walking further into the wood we followed the lower edge of the valley, where *Dryopteris dilatata* carpeted the wetter areas and *Pteridium aquilinum* (bracken) coated the upper slopes. The uncommon climbing corydalis, *Ceratocapnos claviculata*, was locally abundant in the area and seemed able to compete with the bracken. Further on a huge colony of *Equisetum telmateia* with stems in perfect condition gave the woods a prehistoric atmosphere (52/931354). *Dryopteris filix-mas* was frequent and we managed to find a small area with some well grown *D. borreri*.

For lunch we visited a private nature reserve at Tiger Hill (52/927358). This consists of acid heathland with abundant bracken surrounded by woodland. We had a quick visit down to a stream and added *Polystichum setiferum*, *Dryopteris carthusiana* and *Athyrium filix-femina* to our list, all growing in a small area in small quantity (52/926357).

After our picnic we headed off to Horringer Manor (52/8297.6196) near Bury St Edmunds. The manor was built in 1805 and the grounds currently cover about 40 acres. The garden is being rejuvenated by Karen de Rosa and her team of three gardeners. Ferns are a key part of the replanting and many had been supplied by Barrie Stevenson. Karen escorted us around, explaining how the work is progressing. The rockery had been cleared of overgrown shrubs and conifers, exposing the sandstone rocks and allowing existing ferns to thrive. Many cultivars had been planted, mainly of *Polystichum setiferum* and *Dryopteris*. Several patches of *Adiantum venustum* had established and a small colony of *Gymnocarpium dryopteris* was seen by the pond. A wooded area had many ferns including many well grown examples of *Dryopteris erythrosora*, *D. cycadina* and *Cyrtomium fortunei*.

We then moved on to Barrie's extraordinary garden in the village of Cowlinge. Located in a dry, windswept situation, Barrie has created an oasis of rare and unusual plants including many ferns. Hedges, trees and shrubs all contribute to shielding the garden from the wind, and ditches and mounds create micro-climates where the ferns thrive. The wet summer had encouraged lush growth and the ferns were seen at their best. Barrie served up a splendid tea of home-made sandwiches and cakes, which rounded off a very good day.

Plant Heritage meeting, Kersey's Farm, Mendlesham, Suffolk – 21 July

Tim Pyner

Anthony Pigott hosted this meeting on the theme of fern propagation for members of the local Plant Heritage group (formerly NCCPG). A small but appreciative band of BPS members also attended and took advantage of the opportunity to see Anthony's extensive collections of *Dryopteris* and *Equisetum*. Bryan Smith was called upon to demonstrate spore sowing techniques in an outbuilding while Anthony supervised microscope examination of spores and sporangia indoors. Bryan coped very well given that he had no prior notice and the

Plant Heritage members all left with a much enhanced knowledge of fern cultivation and of propagation in particular. The meeting was very well attended and I received a couple of requests regarding BPS membership that will hopefully be followed up. I would like to thank Anthony and Margo for hosting a very informative meeting and giving local BPS members the chance to spread the word about ferns amongst a very keen group of horticulturalists.

Corton Woods & Lowestoft, Suffolk – 28 July **Tim Pyner (a.m.) & Roger Golding (p.m.)**

This meeting came about through the remarkable discovery of *Oreopteris limbosperma* in Corton Wood (62/544966) in 2010 by Nick Blacker. This was communicated to me by former Essex resident Chris Romer and I asked Bryan Smith to visit and confirm the sighting. Bryan was our leader for the day and both Nick and Chris were able to join eight members at Corton on a cool, overcast day. The woods were formerly part of the Colman (of mustard fame) Estate and are only a stone's throw from the North Sea. Consisting of secondary woodland, predominantly of sycamore (*Acer pseudo-platanus*), the dry conditions seemed distinctly unpromising. However, bracken (*Pteridium aquilinum*) was frequent in places and before long we came across some deep ditches and a small pond. Some large *Asplenium scolopendrium* grew on the ditchbanks, and around the pond with *Dryopteris filix-mas* were some impressive *Polystichum setiferum*. These were quite variable, perhaps indicating that they had arisen via spores from local gardens or from former cultivation on the estate. Moving on we passed much *Dryopteris dilatata* and occasional *Athyrium filix-femina* in damp spots. We were able to confirm that *Dryopteris affinis*, *D. borreri* and *D. carthusiana* were all present in small quantity. We finally reached the main target of the morning and found ourselves admiring at least four large *Oreopteris* in a small area with a small plant of *Blechnum spicant* nearby. These were growing in a damp but not wet area amongst some robust brambles (*Rubus* sp.). *Oreopteris* had been considered extinct in Suffolk as it had not been recorded since the 1960s until Howard Matthews found one plant in a wood near Ipswich in 2011. This new colony seems to be of natural occurrence despite the unlikely location and we were able to provide management advice that will hopefully allow the colony to persist. It would appear likely that *Oreopteris* could occur unnoticed in small numbers in other suitable habitats in Suffolk.

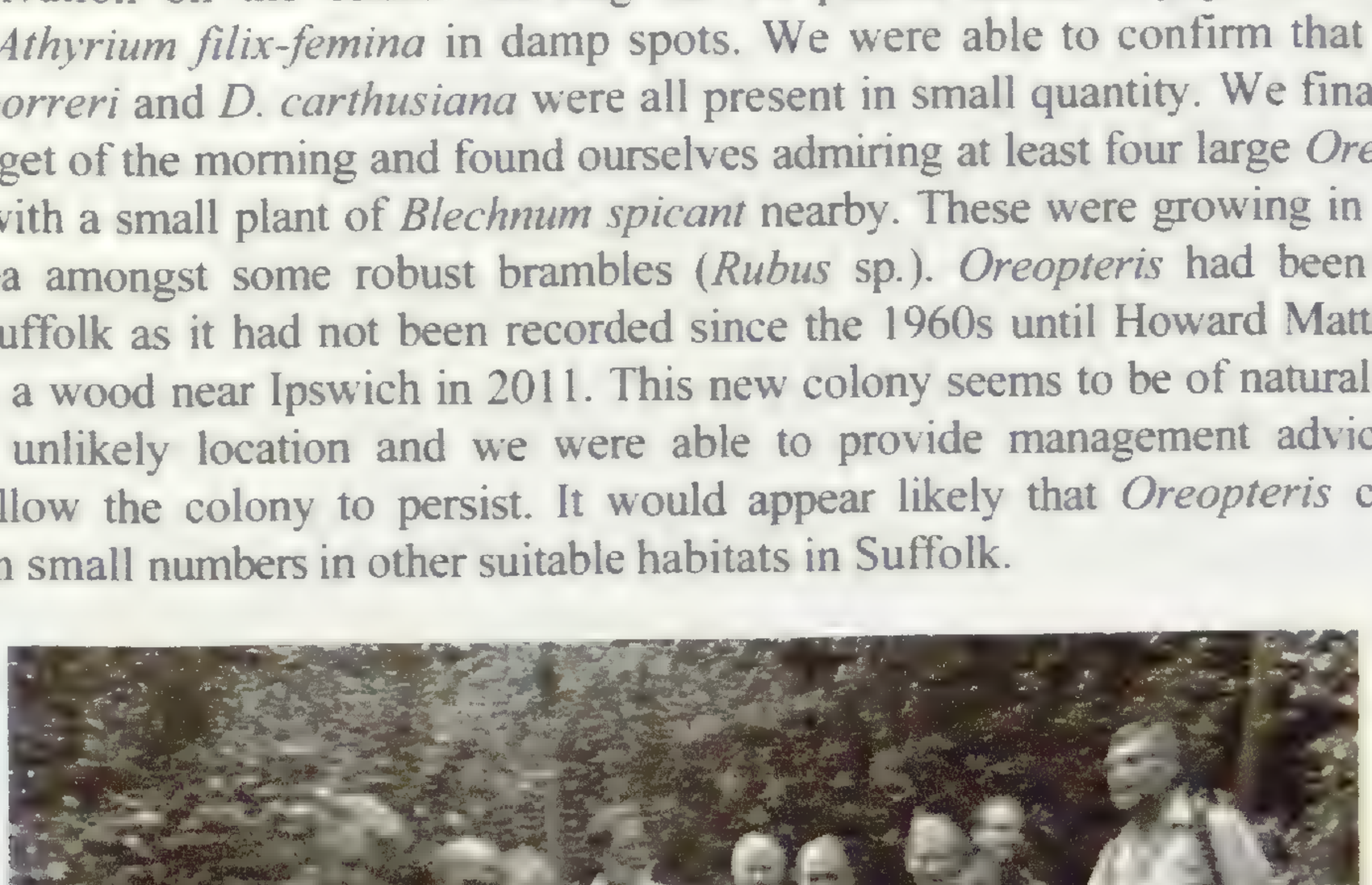


photo: B.D. Smith

***Oreopteris limbosperma* at Corton Wood, Suffolk**

Tim Pyner, Barrie Stevenson, Roger Golding, Chris Romer, Karen & Stephen Munyard, Michael Radley, Nick Blacker, Bryan Smith

After a picnic lunch on the adjacent beach, where we watched a porpoise pass by, we visited three wall fern sites. The first, a bridge over the old disused railway at Corton Long Lane (62/541969), built of glazed engineering bricks with rather decaying mortar, hosted a mix of *Asplenium ruta-muraria* (wall rue), *A. scolopendrium* (hart's tongue) and *A. adiantum-nigrum* (black spleenwort). The second was a similar bridge over the same old railway line beyond Corton (62/536980); in contrast this had almost exclusively *A. adiantum-nigrum*. The final site was a disused brick building by the docks close to the centre of Lowestoft (62/527930), where we admired what is probably the easternmost population of *Asplenium ceterach* (rustyback) in Britain.

We then made our way to Dick and Anna Lincoln's house in Mutford where we were entertained with a delicious tea while enjoying late afternoon sun and admiring their lovely garden, with its small but choice selection of ferns.

Norfolk: Houghen Plantation & Drayton Drewray, near Horsford, & the Exotic Garden, Norwich – 8 September

Bryan Smith

photo: A.J. Evans

Houghen Plantation, Norfolk

Bryan Smith, Wendy Gowen, Julie Reed, Simon Gowen, Neil Dickinson, Gill Smith, Sylvia Martinelli, Chris Evans, Tim Pyner

Ten members met at Haveringland Road car park (63/181175), just north of Horsford, to explore the part of Horsford Woods known as Houghen Plantation. Several interesting ferns, including *Blechnum spicant*, *Dryopteris borreri* and *Oreopteris limbosperma*, had been previously reported here by local member Mary Ghullam. We headed north-west into the pine woods and quickly found *Dryopteris dilatata*, *D. filix-mas* and a single plant of *D. carthusiana*. However, it was not until we started following a ditch southwards (63/179175 to 179172) that we encountered numerous excellent colonies of *Blechnum spicant*. Passing a big pond, we found large areas of sphagnum moss in which grew a lot more *D. carthusiana* (63/178170) and a possible *D.* × *deweveri*. Before returning to the car park we added *D. borreri*, *D. affinis* and a very crispy form of *Pteridium aquilinum* – though it must be noted that the woods abounded with the normal form. Foregoing lunch, a couple from the group drove round to the southern end of the woods known as Drayton Drewray to try and find *Oreopteris limbosperma*, and although unsuccessful, they did find a couple of good plants of *Dryopteris affinis*.

After lunch, the group reconvened at the Exotic Garden, Thorpe Road, Norwich (63/245083) where Will Giles has spent the past 25 years transforming a derelict garden into an exotic paradise. Our guide was Ian Roofe, and we were fortunate to visit on a 'non-opening' day, so we had the place to ourselves. It would be impossible in a short article to list all the exotic palms, succulents and ferns we saw, though details can be found on the website (www.exoticgarden.com). Suffice to say that of note we saw the largest *Pyrrosia sheareri* that you are ever likely to encounter outdoors in the UK, various tree ferns and a large undulate *Woodwardia radicans*. All in all, another fine East Anglia Group outing.

Indoor meeting, Oulton Broad, Suffolk – 27 October — Tim Pyner

Eighteen members attended our regular autumn meeting hosted by Gill and Bryan Smith. This is a wonderful opportunity to socialise and catch up with friends in a relaxed and friendly environment. As always we were served an excellent lunch provided by Gill and Karen Munyard with various extra goodies provided by other members. The day was cold and showery and garden was very muddy after several days of rain. Needless to say the ferns and other plants were in excellent condition and much time was spent browsing the wonderful array of ferns. We then had a variety of presentations showing ferns from India, South Africa, Austria and Germany. The afternoon was rounded off with tea and cakes. Many thanks to Bryan and Gill for hosting the autumn meeting, which is always a special occasion.

MANCHESTER AND NORTH MIDLANDS

Clubmosses in Derbyshire – Kenslow Clay Pits – 26 May — Yvonne Golding

Six of us met by an unmade lane about one mile north-east of Newhaven (approximately 43/177618). Our leader, Trevor Taylor, had secured permission for us to park in the private lane and visit the site. Our aim for the day was to survey Kenslow pits for clubmosses, which are not particularly common in Derbyshire. These pits are unusual for the White Peak in having acidic soil; they contain the remains of pockets of silica clay that have been excavated for making engineering bricks. The clay had been deposited in the Miocene period, the erosion product of the sandstone that used to completely cover the limestone dome. We were pleased to be joined by Grace Wheeldon who, with her husband George had first discovered this site in 1977.

photo Y.C. Golding

Pamela Simpson, Roland Ennos, Trevor Taylor, Paul Ruston & Grace Wheeldon in Kenslow Pits, Derbyshire

We first visited the furthest pit to find it full of sheep and very well grazed. When Roland and I visited this site the previous year the pit was sheep-free. On that occasion we counted more than 50 plants of *Huperzia selago* growing in a damp gully beginning at 43/1871.6129 and stretching to 43/1872.6129, with a smaller patch of approximately 15 plants at 43/1872.6130. We now found much of the *Huperzia* grubbed up but mostly uneaten; the whole area was very dry. We re-found the two plants of *Lycopodium clavatum* at 43/1872.6131 and 43/1873.6131 that we had seen the previous year and eagle-eyed Grace spotted another plant at 43/1880.6129. In 1987 Alan Willmot recorded several vigorous patches of *L. clavatum* (*Bulletin* 1987). We searched in vain for *Diphasiastrum alpinum*, which in 1977 used to grow profusely on one side of the pit (pers. comm. Grace) and in 1987 there were still four patches (*Bulletin* 1987). An explanation for the loss could be excessive dryness in successive years and/or sheep grazing!

After lunch we moved to the pit nearer to our parking place, which was much damper and free of sheep, with standing water on many levels. We sat for some time watching newts climbing up plant stems to break the surface for air. Trevor showed us some healthy populations of *Huperzia selago* at 43/1835.6152, 43/1834.6152 and 43/1824.6153. Here we

replanted some grubbed up pieces of *Huperzia* that we had rescued from the first pit. We decided to walk down to a small lake at the bottom of the pit. We were hoping to see more newts but in fact just as we were turning to head back, Pam Simpson found the first plant of adder's tongue (*Ophioglossum vulgatum*) at 43/1829.6149. Once seen, we found a lot more all the way up the slope that we had just walked down! Finally, by the side of another pond near the entrance we found *Equisetum fluviatile* and *E. arvense*. Other ferns in the pit were *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata* and *Blechnum spicant*.

Before heading home we stopped further along the road towards Newhaven to examine an old stone wall on which grew many of the common Derbyshire limestone ferns: a beautiful colony of *Cystopteris fragilis* with *Asplenium ruta-muraria*, *A. trichomanes* subsp. *quadrivalens* and *A. scolopendrium*, with a single plant of *Polystichum aculeatum*. We went home very happy that we had walked those extra yards.

Ferning around industrial Broadbottom, Cheshire (Greater Manchester) & Derbyshire – 21 July

Roland Ennos

The walk, led by John Grue, started in the cobbled car park of Broadbottom railway station, and proceeded down the main street, passing the old goods sheds that used to service the many mills that employed up to 6,000 people during the 19th century. The roadside wall next to the sheds (33/992938) proved to be the home of healthy colonies of several species of *Asplenium*, namely *A. trichomanes* subsp. *quadrivalens*, *A. ruta-muraria* and *A. scolopendrium*, with *Polypodium interjectum*, all of which, according to John, had colonised in the last 25 years following the reduction in acid rain from industrial Manchester. Crossing the road and ascending Gorsey Brow to the left, we passed an interesting depauperate male fern, then turned right on The Hague and scrambled to an excellent viewpoint that looked out over to the glaciated Woodhead Pass to the north-east, to the Etherow, which had gouged out the valley below us to the east and right over to the Charlesworth Coombes to the south-east, a noted botanical site before the Industrial Revolution. Back on the main road John showed us several plants of the rare (for Cheshire and Derbyshire) *Asplenium adiantum-nigrum* growing on a wall approaching the railway viaduct; this species had been present here for at least 25 years. We crossed the River Etherow into Derbyshire along (non-ferny) bridges, and then briefly walked in a wooded former quarry along the Transpennine Trail where there were several large woodland ferns: *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* and large plants of *Asplenium scolopendrium*. There was also a single plant of *Polystichum setiferum*.

photo: Y.C. Golding

Alison Evans, Anka Blendin, Ann Haskins, John Grue, Roland Ennos & Dave Bishop at Broadbottom

Crossing the road and passing by the Catholic Church (33/997936), we walked along the left bank of the Etherow, passing by colonies of the two horsetails *Equisetum arvense* and *E. palustre*. The horsetail theme continued as we entered the ancient Tom Wood, where flat areas next to the river had a large stand of fine *E. telmateia* (33/996931). The wood also revealed a typical woodland flora of *Dryopteris dilatata*, *D. borreri*, *Pteridium aquilinum*

and *Athyrium filix-femina. A*fter lunch on a field above the wood, several new species were found within: the expected *Blechnum spicant* (though only one plant), huge stands of the wood horsetail *Equisetum sylvaticum*, and finally an unexpected plant of *Polystichum setiferum.* Retracing our steps, we re-crossed the Etherow back to Cheshire, entering the flat 'broad bottom', which was the inside of the curve of the river. Here the party visited a factory shop and underwent retail therapy in the fine plant nursery before entering the site of the former cotton mill complex. Ferns lined the walls of former mills, engine houses and dye works, specimens of *Dryopteris affinis*, *Polypodium interjectum* and *Polystichum setiferum* being particularly noteworthy. Leaving the mill complex, the walk climbed gently past the rocky outcrops of the valley and up into the edge of Great Wood, to which John's garden abutted. The walk ended with a most enjoyable tea provided by Anne in the garden, where, shaded by large oaks, we admired both the fine setting and John's selection of ferns and alpines.

Fern diversity in Derbyshire: Longshaw Estate & Eastern Moors – 18 August

Yvonne Golding

We met at Longshaw Visitor Centre (43/266800) in Derbyshire for coffee before exploring the walls of Longshaw Lodge, formerly a shooting box for the Duke of Rutland, now joint offices of the Peak District National Park and the National Trust. Here we found all the usual suspects: *Asplenium ruta-muraria*, *A. scolopendrium*, *A. trichomanes* subsp. *quadrivalens*, *Cystopteris fragilis* (very unusual specimens) and *Polypodium vulgare*. On our walk down to Padley Gorge Wood we passed several ferns, notably *Athyrium filix-femina*, *Dryopteris filix-mas*, *D. dilatata* and *Equisetum arvense*. Padley Gorge (43/254793) is a deep narrow valley with the Burbage Brook, which used to be the Derbyshire/Yorkshire boundary, running along the bottom. The wood is a fine example of the sessile oak/birch with alder, rowan and holly woodland once characteristic of the edges and valley sides of the Dark Peak. Here, as well as male and lady ferns, we found fine examples of typical acidic woodland ferns, namely *Blechnum spicant*, *Oreopteris limbosperma* and quite impressively tall and lush specimens of *Pteridium aquilinum*, which grew on the nests of the hairy, northern wood ant. On a stone-built pumping station we found *Asplenium trichomanes* and on a stone bridge over the brook, *A. scolopendrium.*

photo: A.J. Evans

Ann Haskins, John Grue, Henry Folkard, Chris Evans, Paul Ruston, Yvonne Golding & Roland Ennos at Longshaw

We took lunch at Grindleford Station and then scoured the walls of Totley Tunnel (43/250787), which supported all the limestone ferns already seen. For railway enthusiasts: built in 1889, at 6,230 yards (3.5 miles), it is the longest non-electrified railway tunnel in England, formerly run by the Midland Railway (now Northern Rail) between Manchester and Sheffield! We walked up to Yarncliffe Quarry (43/255794), where we saw many of the common woodland ferns already seen but also including *Dryopteris borreri.* Walking back up the B6521 adjacent to Padley Wood, we found good colonies of *Polypodium vulgare*

growing on a wall and on nearby oak trees. We were surprised that no epiphytic polypody was seen growing on trees in the main wood.

Back at the car and refreshed from the ice-cream van, we drove to Ramsley Moor (43/285745) where we visited the dry drainage channel where several colonies of rustyback, *Asplenium ceterach*, grow in profusion along with other limestone ferns including *A. adiantum-nigrum*. We were concerned that the channel was very overgrown with young alders, making access difficult and creating very deep shade but by the end of the week these had been cleared by a Derbyshire knight in shining armour. I have since been back and was able to count the plants, which mostly grow on one side of the channel.

As if this wasn't enough excitement for one day, we then regrouped at the Baslow Edge car park beside Big Moor (43/262747), where we trudged across deep molinia-infested moorland, dodging poisonous adders, to refind an old record of marsh fern, *Thelypteris palustris* and also adding *Dryopteris carthusiana* and *Equisetum fluviatile* to our list. On the way home we stopped to admire the limestone oak fern, *Gymnocarpium robertianum*, on the A6. With more energy we might have dropped down Topley Pike to admire the green spleenwort but thought that 20 species was a nice round number. A good day's ferning!

Sir Gawain and the Green Gametophyte – Lud's Church, Staffordshire – 22 September

Yvonne Golding

A beautiful autumn day took us over the moors and into Staffordshire. Our route went through the village of Flash, which with an average altitude of 463 metres is the highest in the UK. There was a silk mill at Gradbach from 1640 to 1840, with silk weaving and button making as cottage industries throughout the Parish. In the 18th century, a gang used button presses to make counterfeit coins hence the term 'Flash money'. The fine mill has now been converted into a Youth Hostel. Our party of six comprised Ann Haskins, Dave Bishop, Henry Folkard, Roland Ennos, Trevor Taylor and Yvonne Golding. We walked down from the small car park, past the mill, across a tributary of the Dane and up into acidic oak woodland with a thick understorey of bilberry. On a limestone wall near the hostel grew a good colony of *Polypodium interjectum*.

You come across Lud's Church (33/986656) unexpectedly and in fact wouldn't know it was there but for the carved sign luring you into the chasm. You pass through a narrow entrance into what is a deep, damp, steep-sided millstone grit cleft formed many years ago by a natural landslip. It is 15 metres high in places and over 100 metres long, though usually only a couple of metres wide. It is a surprising and magical green chasm that is connected with many myths and legends, the most famous being that of Sir Gawain and the Green Knight, whose profile is allegedly carved in the rock. When the light shines through the gorge at a particular angle the features of the Knight can easily be seen. However, the main reason for our visit here was to hunt for *Trichomanes speciosum* gametophyte, which was recorded by Fred Rumsey in 1990. Trevor quickly found the first site, which allowed us to get our eye in and so subsequently we were all able to find some. We recorded seven sites in total at eye-level but no doubt there were plenty more in crevices higher up. Most patches were deep in slits in the rocks where mosses couldn't grow and generally the sites were slightly drier. Other

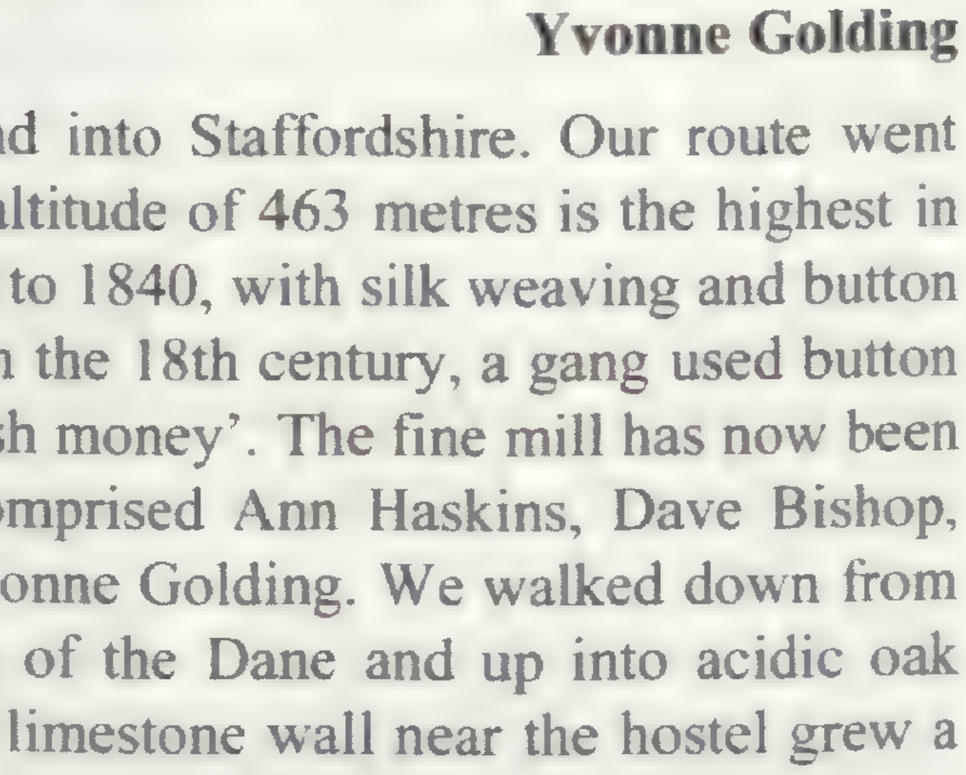


photo courtesy Y.C. Golding

Lud's Church - Ann Haskins, Yvonne Golding, Roland Ennos, Henry Folkard, Dave Bishop & Trevor Taylor

ferns in abundance were lush *Blechnum spicant* and *Dryopteris dilatata*. On the route to the chasm we also found *Athyrium filix-femina*, *Dryopteris filix-mas*, *Oreopteris limbosperma* and, by the roadside, a couple of stands of *Dryopteris cambrensis*, one plant of which had exceptionally shiny forked fronds. Not a huge diversity of ferns but still some exciting finds including a rare bumblebee-mimicking hoverfly foraging on devil's bit scabious. We then went back to Buxton for tea and scones.

Last meeting of the year – Buxton – 27 October — Yvonne Golding

It was a very cold but bright day for our last meeting in Buxton and only six members braved the arctic conditions: Ann Haskins, Dave Bishop, John Grue, Paul Ruston, Roland Ennos and Yvonne Golding. On arrival at Grange Road we took our coffee into the garden and ended up huddled in the greenhouse admiring the latest fern acquisitions, namely *Microlepia strigosa* 'McFadden', *Polypodium azoricum*, *Thelypteris kunthii* and, outside, *Dryopteris dilatata* 'Jimmy Dyce' and a 'new' species *Dryopteris* '*disputei*' (bought as *D. labordei*). As usual, this took far longer than planned so we went for lunch.

Afterwards I showed a presentation highlighting our fern excursions during 2012, which ranged from clubmoss monitoring in clay pits, moonwort hunting on rakes (more next year), ferns associated with industrial archaeology in Broadbottom, National Trust surveying on the Longshaw Estate, and lastly, the search for the green gametophyte at Lud's Church. We exchanged some interesting ideas and hypotheses as to why ferns grow in some places and not others! In addition to our main programme for 2013 we will be fern-planting at Jodrell Bank Arboretum and plan to offer our fern expertise to the Kinder Scout Restoration Project.

NORTH-WEST

Gowbarrow, near Ullswater, Cumbria – 26 May — Mike Porter

On a warm and sunny, though rather windy, morning a select band of fern enthusiasts met at the National Trust car park at Aira Force (35/400200) with the aim of walking through the pteridologically unexplored woodlands that lie between Gowbarrow Fell and Ullswater to view *Polypodium cambricum* on Yew Crag. This handsome, broad-leaved fern, which produces its fronds in autumn and winter, is largely confined to base-rich rocks and walls (particularly limestone) and, though found in a number of sites in Westmorland and Furness, occurs at only this one site in Cumberland where it was found in 1982 by Jeremy Roberts.

The walk through the springtime woods was delightful, with much birdsong – blackcap, garden warbler, willow warbler, chiffchaff and pied flycatcher – and a good range of common ferns such as *Dryopteris filix-mas*, *D. dilatata*, *D. affinis* subsp. *affinis*, *Athyrium filix-femina* and, of course, *Pteridium aquilinum*. At one particularly attractive spot a small rivulet runs down through the woods, fringed by extensive patches of *Phegopteris connectilis* with smaller quantities of *Oreopteris limbosperma* and *Blechnum spicant*.

After a leisurely stroll of about an hour and a half we reached the cliffs of Yew Crag (35/414205) where the hard work began! Yew Crag consists of largely basic volcanic rock obscured by considerable growth of shrubs and small trees and is decidedly difficult of access. Nevertheless, an hour's hard scrambling, clambering, forcing our way through almost impossibly narrow gaps and slithering down steep slopes produced a range of *Polypodium* specimens, which were determined on the spot (and later confirmed under the microscope and by comparison with already identified specimens) as *Polypodium interjectum*, *P. cambricum* and their hybrid *P.* × *shivasiae*. (At this point the leader must acknowledge his indebtedness to Jeremy Roberts who accompanied him on a reconnaissance visit in March and identified the specimens found at that time, and to Robert Crawford whose encouragement during a second visit, just before the official meeting, ensured that the site was actually re-found!)

Having achieved the object of the meeting, we made our way back in warm sunshine (a rare event for this meteorologically most miserable of years!), enjoying the classic view of Ullswater and the mountains at its head. Before we reached the car park and set off for home we had decided that another visit later in the year (late autumn/winter) when *P. cambricum* would be at its best would be an excellent idea.

Swindale, East Cumbria – 17 June

Bruce Brown

Had this joint meeting with the Yorkshire Fern Group been held on the Saturday as originally proposed we would have endured a disastrously wet day. But fate intervened, with Yorkshire members busy at a BioBlitz event in York, so it was put back to Sunday, fortunately dry, if rather cloudy and 'midgey'.

Seven members met about ten miles south of Penrith at the start of the dead-end road into Swindale, where we squeezed into a couple of cars to enable us to fit into a small parking spot a mile or so further on at 35/515132. Swindale is very quiet and pastoral, so different from many of the touristy Lakeland valleys, and the tree-covered hillsides boded well for fern life. The attractive lane to Swindale Head yielded *Pteridium aquilinum*, *Oreopteris limbosperma*, *Athyrium filix-femina*, *Cryptogramma crispa*, *Dryopteris filix-mas*, *D. borreri*, *D. dilatata*, *Polypodium vulgare*, *Asplenium trichomanes* subsp. *quadrivalens*, and, a nice surprise, a lovely patch of *Gymnocarpium dryopteris* at 35/504126.

Beyond the last farm, with the dale head in full view, Robert Sykes outlined our intended route – a rough climb south-west to reach some gullies below Low Blake Dodd at about 500 metres altitude (35/496115), then a contouring line under some vegetated crags to the prominent gorge and waterfalls of the delightfully named Hobgrumble Gill (35/501113). The gullies demanded a little careful scrambling, but with protection from the weather and the nibbling sheep were full of plants and fascinating to explore. Our tally increased with *Selaginella selaginoides*, *Equisetum arvense*, *Polystichum aculeatum* and *Cystopteris fragilis*. Here we also found our first *Phegopteris connectilis* and *Dryopteris oreades*, and a convincing *D. affinis*.

It was hard work crossing the craggy fell-side but our rewards were more *Phegopteris*, *Gymnocarpium dryopteris* and *Dryopteris oreades*, and also a superb colony of bird's-eye primrose (*Primula farinosa*) in full flowering pink. We conferred and reached agreement on some clumps of *Dryopteris cambrensis*. Then Robert Crawford showed us a few fronds of *Asplenium viride* poking out of a crag base. We entered the gorge, scrambling over wet rocks and ducking under trees to reach the base of a waterfall. Here were two good colonies of *Hymenophyllum wilsonii*, and no less than nine fern species, including *Blechnum spicant*, were growing in this shady humid spot.

This was a fitting place to end our recording for the day and we descended the fell-side, enjoying the panoramic view down Swindale. Alec Greening had provided a fern list summarising previous BPS Swindale visits. Our tally of 21 was a few short of the combined totals, notable omissions being *Asplenium ruta-muraria*, *Dryopteris expansa*, *Polypodium interjectum*, *Huperzia selago* and a *Dryopteris affinis* × *D. oreades* hybrid. But we had managed to add *D. cambrensis* and *Equisetum arvense* to the overall total.

Brantwood House & Tilberthwaite Ghyll, Coniston, Cumbria – 28 July

Peter Campion

The weather was not promising, but with the heavens sprinkling 16 of us assembled in the car park of Brantwood House (34/3195) to be greeted by Sally Beamish, the Estate Manager and old friend of the Society. Sally led us into the gardens and told us about W.J. Linton, who owned the house from 1853; he produced a book *The Ferns of the English Lake Country* and encouraged ferns to grow in the garden. The next owner, from 1871, was

John Ruskin who continued to expand the garden and his wife introduced more exotic plants. Down near the house we particularly noted clumps of *Woodsia ilvensis*, originally donated by Heather McHaffie, that were doing well, and the first of a number of *Blechnum penna-marina* plantings.

Up on the hillside we enjoyed old stands of *Osmunda regalis* and *Polystichum aculeatum* and saw extensive areas of *Athyrium filix-femina*, *Dryopteris filix-mas* and *D. dilatata*, all appearing to thrive in the damp and shady habitat. A number of exotics had been planted; someone mentioned one of the sources being Morrisons supermarket! A big stand of *Polystichum munitum* was admired up in the woods with many other planted ferns thriving up there, and we saw a clump of *P. acrostichoides* lower down in the gardens. In the fern garden were extensive plantings of *Dryopteris* and *Polypodium* varieties. When it came to the *Polystichum setiferum* varieties Sally posed the question as to why these were looking a bit yellow and clearly not thriving like the other ferns around. The advice was that a little lime is probably needed; we look forward with interest to see if this proves correct.

photo: P.J. Campion

Brantwood, Cumbria

Melville Thompson, Denise Copson, Steve Mees, Roy Copson, Alison Evans, Frances Haigh, Harvey Shepherd, Bruce Brown, Chris Evans

A visit to Jumping Jenny's café provided an excellent lunch for a number of us, rounding off a good morning. Thank you Sally for your hospitality and for continuing to promote the use of ferns in our gardens.

Alec Greening had picked up a record of the Society from 1959 of 16 ferns found at Tilberthwaite, a few miles north of Coniston, in a short afternoon. Exuding his usual infectious enthusiasm, Alec urged us at least to equal it on our afternoon trip. We parked near a quarry by Yewdale Beck and eight of us ghyll-scrambled up river. Almost immediately (at 35/3056.0099) we found *Asplenium adiantum-nigrum*, *A. trichomanes* subsp. *quadrivalens*, *Athyrium filix-femina*, *Cryptogramma crispa*, *Blechnum spicant* and *Polypodium vulgare*. A few yards on, *Cystopteris fragilis*, *Polystichum aculeatum*, *Dryopteris affinis* and *Oreopteris limbosperma* were spotted. So then the hunt was on to find the other ferns on the old list. *Dryopteris filix-mas* and *D. borreri* appeared quickly and then *Asplenium viride* was found, first, a poor specimen and then a good healthy plant on the right bank. An unusual specimen of *Cystopteris fragilis* gave us cause for thought; the stipe and rachis were completely black all the way to the end of the frond and the pinnae were very narrow and tubular. *Phegopteris connectilis* was the next to appear, first as a single specimen and then a regular colony. The old list did not include *Pteridium aquilinum* and there was plenty!

That left *Dryopteris oreades*, *Gymnocarpium dryopteris* and *Asplenium ruta-muraria* from the previous list. Bruce Brown managed to spot *D. oreades* at 35/3028.0063 and Alison Evans found a convincing *D. cambrensis* so we felt honour was satisfied. Alec waded up to his knees in the interests of science to see if filmy ferns were present just below a waterfall; sadly science was not interested! On the walk back via a civilised path *A. ruta-muraria* was spotted in a series of quarries, so only *G. dryopteris* had eluded us. However, we had found *D. cambrensis*, which with *D. affinis* subsp. *paleaceolobata* gave us a total of 18 ferns,

excluding *Pteridium aquilinum*, within a distance of less than half a mile, and it was a satisfied band that returned to the cars at 16.25p.m. We propose another visit for 2013 with more time to go higher.

Hampsfell & Humphrey Head, South Cumbria – 25 August — Bruce Brown

Nine members met at Grange-over-Sands on a pretty dull day with some rain and drizzle, but that did not deter us. We were pleased to welcome Wendy Nelson, a local botanical expert with a great knowledge of what grew where hereabouts, and keen to share that with us. We went in convoy to park at 34/406785, the start of our walk into Eggerslack Wood. This mixed oak woodland on the lower slopes of Hampsfell grows on shelves of limestone outcrops with more acidic glacial drift in between, resulting in a mixed bag of plant species. So *Dryopteris dilatata* flourished alongside *Asplenium scolopendrium* on adjacent limestone outcrops. We soon added *Dryopteris filix-mas* and *Athyrium filix-femina* amongst areas of *Pteridium aquilinum*, then *Blechnum spicant* and *Oreopteris limbosperma* cropped up. There were interesting '*affinis*' plants to mull over. Forms of *Dryopteris borreri* were present, plus some large and robust-fronded *D. affinis* subsp. *affinis*, and one convincing subsp. *paleaceolobata* with characteristic darker red-brown scales, crimped pinnules and splitting indusia. One particularly attractive *borreri* had overlapping pinnae and untidy foliose pinnules, recorded as *D. borreri* forma *foliosum*. A few *Dryopteris* plants had been infected by the leaf-mining moth, showing heaps of soral debris on the frond underside, as explained in Roger Golding's article in *Pteridologist* 2012.

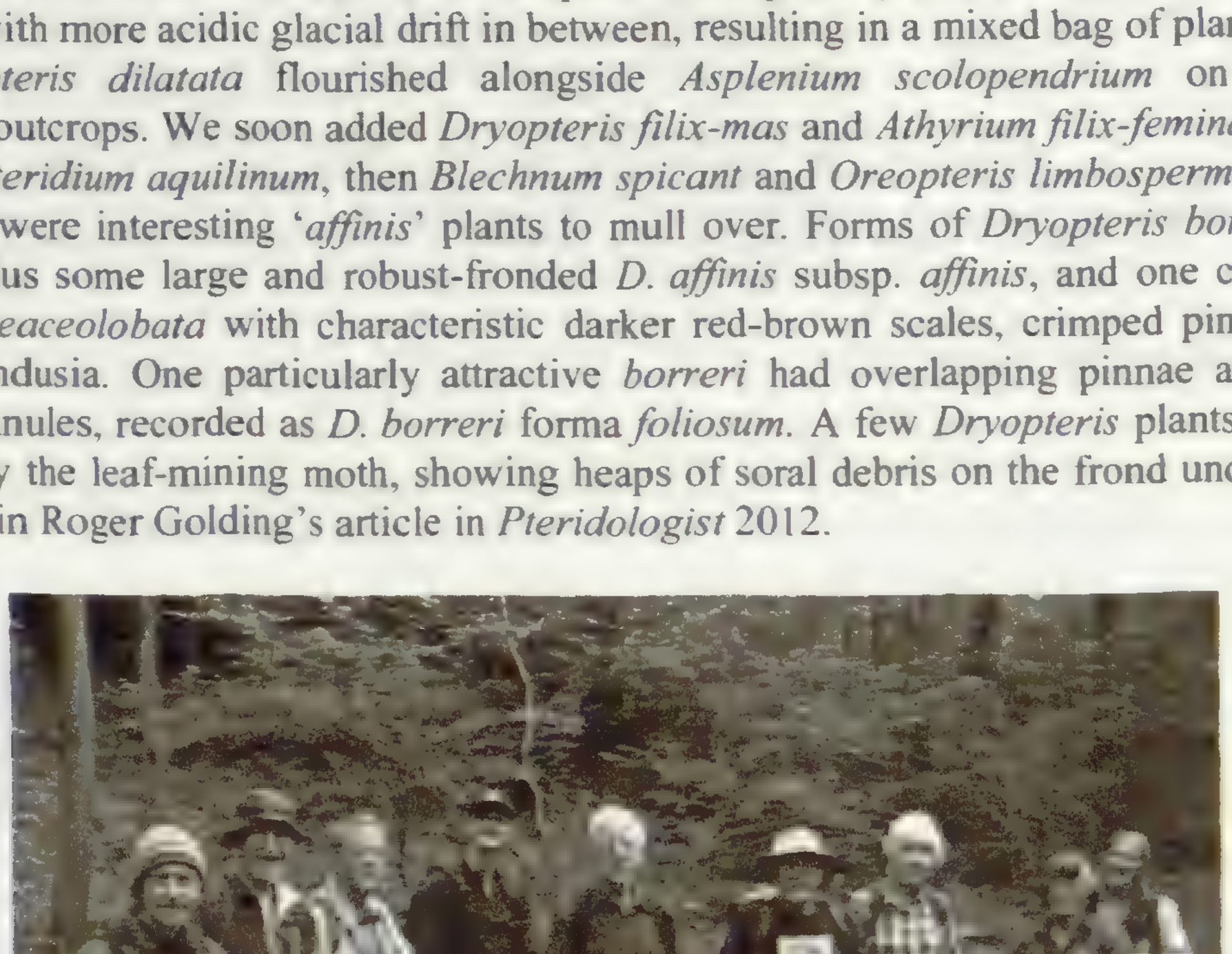


photo A.J. Evans

Hampsfell, Cumbria

Mike Canaway, Bruce Brown, Chris Evans, Steve Mees, John Daffern, Alec Greening, Frances Haigh, Ann Haskins, Wendy Nelson

A rough detour off-path to check some large *D. affinis* fronds was rewarded with an unexpected plethora of *Phegopteris connectilis* (34/406789), in what proved to be a very ferny area where we gathered for a group photo. Another short diversion by a sweet chestnut tree revealed a nice cluster of *Dryopteris carthusiana* fronds, typically growing very upright and facing in different directions. A single plant of *Polystichum aculeatum* was seen by some old water tanks that many years ago were the emergency water supply for Grange-over-Sands.

We exited the woodland into open country with patches of limestone pavement, gradually making height to the summit of Hampsfell. The pavement housed the usual suspects – *Asplenium trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *Polypodium vulgare* and

Cystopteris fragilis, but the most frequent inhabitant here was the nationally scarce *Dryopteris submontana*. In the popularity stakes though it lost out to a single attractive clump of *Asplenium ceterach*! Wendy showed us a small colony of *Gymnocarpium robertianum*, the other limestone specialist, but less common on Hampsfell, whilst *Asplenium viride* eluded us altogether. The summit (34/399793) is marked by The Hospice, a small stone building with shelter below and steep steps outside leading up to an open-air viewing platform above. The shelter was of more value to us today in the steady rain! We descended directly back to the cars for a rather late lunch.

Humphrey Head was part two of the day's activities and we parked close to the 'sea' at 34/390740, although with the tide out there was just sand and saltmarsh in view. Between us and the summit at 53 metres there were vertical limestone cliffs, well wooded in parts and very species rich. Two ferns of particular note – *Polystichum setiferum* in the denser woodland and *Polypodium cambricum* on the cliffs – were sought out. The *P. cambricum* here was large-fronded with long pinnae in the mid-section and notably long end lobes. A nice crested 'scollie' was also found.

We explored along the crags to the end of the headland, splashed through the channels (we had been warned of these so wellies had been recommended) and climbed up the grassland above to reach the summit. Along the way we spotted *Asplenium adiantum-nigrum*, *Athyrium filix-femina* in a crack (a recent tetrad record) and paid homage to the rare spiked speedwell (*Veronica spicata*), almost gone over by now. On dropping down to the road at 34/388746 a *Polypodium* was noted and later confirmed to be *P. interjectum*. Some horsetails were present along the roadside – *Equisetum arvense* and *E. palustre*, to add to *E. telmateia*, which we had seen earlier at 34/382757. Some *Polystichum* fronds were sampled for a hybrid check later but were all *P. setiferum*. So it was back to the cars and a big thank you to Alec Greening and Wendy for a great day out with 28 fern taxa seen.

Annual General Meeting, Holehird, South Cumbria – 20 October Peter Campion

Twenty-one members assembled for the eighteenth AGM of the North-West group. The weather was good in contrast with so much of the year. Sales of ferns were good again, providing useful funds enabling us once again to keep the subscription down to £2. After coffee and rather good biscuits Mike Porter presented 'Ferns of Cumbria' to us as a slide-show. Not only did this remind us of our rich heritage in the north-west but also that many of the so-called common ferns are exquisitely beautiful and so well adapted to our man-made structures as well as to the landscape.

The fern collection at Holehird was inspected during our break for lunch; in spite of being washed over several times in the excessively wet weather this year they were obviously being well looked after by Steve Mees.

Our AGM gave us the Secretary's and Treasurer's Reports: Peter Campion summarised the year's highlights with help from those who had taken part, and the financial statement was accepted and Ann Haskins thanked for her guardianship of the treasury; both were re-elected. Gratitude was expressed to Peter Campion for his service (rather reluctant to continue as Hon. Secretary, he was offered lots of help) and to all the volunteer leaders without whom nothing would happen!

John Grue judged the fern competition and awarded prizes for the best ferns to Alec Greening and Melville Thompson – congratulations to them. We had changed the competition to a Fern Sudoku in the hope of breaking the Greening monopoly of winning the Photographic Competition but Alec still managed to get the highest score. Next year Alec can set one!

An open forum took place after the AGM. Suggestions were made for meetings for 2013 and Peter Campion showed pictures of ferns in La Gomera, Canary Islands, and sought help in identifying several of them.

After tea and rather good cakes provided by members the meeting closed; another good AGM.

SCOTLAND

Monitoring visits to Inverarnan *Lycopodiella* site, Perthshire – 12 May & 30 June

Heather McHaffie

Scottish members of the BPS have been visiting the *Lycopodiella inundata* site at Inverarnan (27/315185) at three-yearly intervals since 2003 and we were looking forward to this monitoring visit. When I first visited the site in 1989 with Clive Jermy it was grazed by cattle, had short turf, less bracken and vigorous *Lycopodiella* plants growing in flushed but trampled areas around two streams. Ten years later in 1999 grazing had apparently ceased, except for occasional deer, and the grass was much longer. During the last decade *Myrica gale* has been spreading along the side of the upper stream and several of the former locations have been completely shaded out. A few very wet areas continued to have good populations but the smaller patches were generally disappearing.

On this occasion our visit followed two hard winters and then a more moderate one. Our immediate impression was that there was a considerable reduction in abundance. The visit was early in May when we hoped to be able to see the plants more easily before the grasses grew up. There are always problems in making repeated counts as it is hard to be entirely consistent in judging what constitutes a single plant. Generally if a shoot was separated from an adjacent one it was counted as one shoot, but if it was a vigorous plant with branched shoots still attached it was still counted as one shoot. In this way a vigorous population of seven multiple shoots can misleadingly sound similar to a fragmented population with seven small shoots that are not thriving. In general, the plants we saw looked healthy but there did seem to be far fewer than before. We also tried measuring the area they occupied, but this was difficult as some plants were widely dispersed and others very dense so an estimate of abundance needs to be included.

photo: H. McHaffie

***Lycopodiella* monitoring, Inverarnan**
Frank McGavigan, Mary Gibby, Nadia Russell, Paul Sharp, Cliff Davies

Monitoring counts of the number of shoots of *Lycopodiella inundata* at Inverarnan

Year	1999	2003	2006	2009	2012
No. shoots	575	1,082	508	852	240

In case our visit was too early in the year, I managed to drop in again at the end of June and had some slightly improved counts, but the numbers were still well below those of any of the previous years. Although different people might have given different counts from the same site in the same year, the historical variation in counts is considerable and probably reflects natural fluctuations in the sub-populations; by any standard the population had dramatically reduced. The most positive discovery was that the whole site has stock-proof fencing once more and there were signs of cattle grazing. This is likely to check the growth of undesirable taller species and provide the level of disturbance needed for a better habitat. The next visit in 2015 should allow sufficient time for recovery and we look forward to the expansion of these populations.

Strathyre, Perthshire – 12 May

Frank McGavigan

(*Participants*: Cliff Davies, John Edgington, Mary Gibby, Bridget Laue, Frank McGavigan, Heather McHaffie, Nadia Russell, Paul Sharp, Alastair Wardlaw.)

After the *Lycopodiella* count Heather led us round to Strathyre (parking at 27/560170), where we were to walk a little way along National Cycle Route 7. This convolutes round Scotland from Carlisle to Inverness, and in many parts is an excellent hunting ground for ferns. It is easily accessible and gentle walking as much of the route follows old railway tracks, often brimming with fern interest. At Strathyre it threads along woodland ways and inevitably calcicole ferns are in short supply, however, we did see four spleenworts on lime-mortared walls: *Asplenium adiantum-nigrum*, *A. ruta-muraria*, *A. scolopendrium* and *A. trichomanes* subsp. *quadrivalens*. Nothing unusual there, and the woodland ferns were common things too – the usual *Dryopteris* species (including what the experts said were convincing *D. affinis* and *D. borreri*, though I felt it was a little early in the year to do anything but agg.), lady fern of course, lemon-scented fern (how many have actually detected its lemon fragrance?), hard fern (much underrated, presumably because it is so widespread), common polypody (growing, as it frequently does in the west of Scotland, on oak and sycamore trees), and the inevitable bracken. *Cystopteris fragilis* was spotted here and there, and Mary found *Phegopteris connectilis* and then *Equisetum sylvaticum*. (I am not a great fan of horsetails but can't help admiring the elegant beauty of this one. I even have it growing in my garden and found myself hand-weeding it the other day. Cosseting horsetails: what has become of me?) We walked for about a mile south from Strathyre till we had a magnificent view down the length of Loch Lubnaig. To enjoy this before the onset of the midge season was a real treat. Then on the way back, down by the river, Mary (again) found *Polystichum aculeatum*. There is actually quite a lot of this further north on the ex-railway sections of the track, but it is always good to find as it's such a beautiful fern. Verdict: excellent site for leisurely fern buffs.

SWT Ballachuan Hazelwood Nature Reserve, Isle of Seil, Argyll (17/7615 & 7614) – 23 June

Maurice Wilkins

(*Participants*: Tim Godfrey, Bridget Laue, Frank McGavigan, Sven Rasmussen, Paul Sharp, Maurice Wilkins.)

As I'm involved with the Scottish Wildlife Trust at local level I thought it might be interesting to invite Scottish BPS members along to Ballachuan Hazelwood to record fern species. Not only would this be a good day out for members but it would benefit SWT – the reserve convenor admitted to knowing little about the ferns on site. As it happened, the 23rd June proved to be (almost) the only wet day in a couple of months of dry, warm weather on the west coast and just five members assembled in the lay-by below Kilbrandon Church where we were joined by Sven Rasmussen, Area Reserves Manager for the SWT. Once swathed from head to foot in waterproof clothing of various colours and designs, we entered the reserve.

Ballachuan is in the south-east corner of the island of Seil, some 15 miles south of Oban, and occupies a 23-hectare strip of land about 1.6 kilometres long and averaging around 400 metres wide. A rocky ridge down the centre of the area is covered with hazel scrub and is considered to be a rare example of a climax hazel wood, possibly unique to the west coast of Scotland. There are a variety of other habitats where we intended to search for ferns: wet, open and occasionally grazed meadows, open areas within the woodland and a coastal strip between rocks and woodland edge.

The reserve has a number of interesting higher plants, but is best known for its wonderful collection of bryophytes and fungi and we didn't expect to find anything out of the ordinary in the fern line. In fact after the first three or four species Frank announced that we were unlikely to find anything else; fortunately he was wrong! We agreed that none of us felt competent enough to delve into the nether regions of *Dryopteris affinis* agg., so we left that

one well alone! Species recorded: *Asplenium adiantum-nigrum*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis* agg., *D. carthusiana*, *D. dilatata*, *D. filix-mas*, *Oreopteris limbosperma*, *Phegopteris connectilis*, *Polypodium vulgare* and *Pteridium aquilinum*, plus one horsetail – *Equisetum hyemale*.

We had expected to find *Dryopteris aemula* but were unable to do so. We had also hoped to find *Asplenium marinum*, so after a rather rainy picnic above the beach we hunted along the shoreline, though didn't have time to go far. However, the rock formation was not right, being of rounded rocks only just above the high-water mark, and all we found was a solitary specimen of *A. adiantum-nigrum*.

We didn't cover the whole of the reserve, unfortunately. In spite of the weather it proved to be an enjoyable outing.

Ardkinglas Woodland Garden, Loch Fyne, Argyllshire (27/179105) – 21 July

Frank McGavigan

(*Participants*: Frank Katzer, Bridget Laue, Frank McGavigan, Chris Nicholson, Paul Sharp, Glyn Toplis.)

photo: P. Sharp

Frank McGavigan, Chris Nicholson, Bridget Laue, Glyn Toplis & Frank Katzer behind giant *Athyrium* at Ardkinglas

Glyn Toplis, the Manager of the Ardkinglas Estate, had prepared attractive posters to advertise our fern survey, but not a single member of the public appeared. This illustrates the problem faced by so many of the gardens and estates of Scotland: beautiful though they are, they are mostly distant from the centres of population and therefore short of visitor numbers with all the financial consequences this entails. A great pity, especially for Ardkinglas, which is a magnificent woodland garden with several Champion Trees, including the tallest tree in Britain, a Grand Fir (*Abies grandis*), which stood 64 metres 28 centimetres tall at the last measurement.

The damp, acidic conditions favour the usual run of ferns for the west of Scotland: *Dryopteris affinis* agg., *D. dilatata*, *D. filix-mas* and *Oreopteris limbosperma*, but the dominant ferns by far were at first *Athyrium filix-femina*, with some magnificent specimens some four or five feet tall, and then in a more densely wooded part, *Blechnum spicant*, large specimens also, elegant and graceful. What made these two ferns the most common? Some nuance of climate, the particular soil pH, or did they just get there first? We also found *Phegopteris connectilis*, *Polypodium vulgare* (in trees and in the moss on top of a dry-stone wall), *Pteridium aquilinum* of course, and then Frank Katzer spotted a solitary, rather small *Osmunda regalis*. Was this a remnant of the original clump where Osmund, the Loch Fyne boatman, hid his wife and children from the marauding Danes, thus giving this fern its name? A nice story that I would like to believe.

We did not find *Dryopteris aemula* or *D. expansa* or any filmy ferns, which you might expect to be present, but there again we did not do a complete survey of the estate, which is

vast so they could easily be there somewhere. We did find on the walls of the old estate mill our only calcicole species of the day: *Asplenium trichomanes* and *A. scolopendrium*. How they found their way there in this sea of acidity is another mystery.

Ardkinglas is a wonderful garden with magnificent trees and champion lady ferns. I urge you to visit.

Isle of Arran – 11-12 August

Saturday – North Arran

Paul Ripley

(*Participants*: Morag Campbell, John Edgington, Tim Godfrey, Lindsey Holleworth, Jennifer Ide, Charlotte Karsemeijer, Bridget Laue, Frank & Linda McGavigan, Helen Mendenhall, Chris Nicholson, Paul Ripley, Fiona Rutherford, Paul Sharp, Tony Smith, Nat West.)

Sixteen members and guests met at North Sannox (26/016467) and were joined by Tony Smith, who is hugely knowledgeable about the plants on Arran. We followed the path through Forestry Commission land towards 'Fallen Rocks'. To the right (east) of the path lay the seashore, to the left (west) was damp woodland leading to damp rocks where we found both *Hymenophyllum tunbrigense* and *H. wilsonii*. *Dryopteris aemula* was abundant here (and *Pteridium aquilinum*), but we also noted *Athyrium filix-femina*, *Blechnum spicant*, *Phegopteris connectilis*, *Polypodium vulgare*, *Oreopteris limbosperma*, *Dryopteris dilatata* and *D. borreri*. *Asplenium trichomanes* subsp. *quadrivalens*, *A. scolopendrium* and *Polystichum setiferum* were present on areas with some lime, but *A. trichomanes* subsp. *trichomanes* was also noted. On the seaward side of the path a large specimen of *Dryopteris affinis* was seen.

Our next stop was by the road along Glen Sannox, near a small disused quarry (16/993468). Across the road was the site of an abandoned village where we found *Ophioglossum vulgatum* in some quantity, and also *Oreopteris limbosperma*, *Blechnum spicant* and *Dryopteris dilatata*. *Pteridium aquilinum* was of course common in spite of attempts at control by spraying. *Botrychium* has been found here in the past but we found no trace.

Parking close to the ferry (and an excellent sandwich store) at Lochranza, we followed the road in the direction of Catacol (16/925509 to 912498). The road follows the coast, but landward there is a short damp or boggy strip before cliffs below the alder carr above. In the damp area under the cliffs was noted *Athyrium filix-femina*, *Oreopteris limbosperma*, *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. dilatata*, *D. aemula*, *Blechnum spicant*, *Phegopteris connectilis* and *Polypodium interjectum*. On the cliffs themselves we found *Polystichum aculeatum* and our objective – *Osmunda regalis*.

On reaching Catacol, a wall by the roadside contained *Asplenium ceterach*, *A. trichomanes* subsp. *quadrivalens* and *A. ruta-muraria*. The owners of this bungalow were pleased to be informed about their rich wall. We retraced our steps and on the road just north of Corrie (26/021445) we made a short foray into a boggy area where we found the only *Dryopteris carthusiana* on the island. It grew with *D. dilatata*, *D. affinis*, *Pteridium aquilinum* and *Oreopteris limbosperma*.

Our last stop was a very boggy area (sphagnum and alder carr) by the road just south of Corrie (26/026415). *Dryopteris aemula* was everywhere (lovely!) – in boggy areas and even occasionally epiphytic on trees. *Hymenophyllum tunbrigense* was not uncommon on the boles of trees and we also saw *Dryopteris affinis*, *D. dilatata*, *Oreopteris limbosperma*, *Blechnum spicant*, and, near the road, *Equisetum arvense*.

We rounded off an excellent day with a meal at the Sannox Bay Hotel, with beautiful views across the bay to the islands of Bute, Greater and Lesser Cumbrae and the Ayrshire coast. As darkness fell, a Viking longboat hove into view and fireworks entertained us as part of the local 'Uphellya'. Fortunately we were able to buy off the Viking raiders with just a small donation to charity. My thanks go to Chris Nicholson for planning and organising such a varied and fern-rich day. This was my first visit to Arran and I definitely want to return.

Sunday morning – Cordon Wood **John Edgington**

(*Participants*: John Edgington, Tim Godfrey, Jennifer Ide, Bridget Laue, Frank McGavigan, Chris Nicholson, Paul Ripley, Paul Sharp.)

Perhaps we had exhausted our local guests since, under threatening skies (which later relented to give another fine day) just the eight members plus Molly the dog met to explore Cordon Wood at Lamlash. This is a narrow strip of deciduous woodland dissected by streams running down to the shore, and so wet and overgrown that Tony had advised us to stick to the upper path, which began in a front garden (26/027300). Passing through a thicket of Indian balsam, yellow loosestrife and *Fuchsia magellanica*, the path suddenly turned into fern heaven. Its humus-rich banks supported both robust *Asplenium scolopendrium* and *Blechnum spicant*, together with huge shuttlecocks of *Athyrium filix-femina*, *Dryopteris aemula* (which by now we could easily distinguish from the equally abundant *D. dilatata*) and *Oreopteris limbosperma*, and much *Polypodium vulgare* and *Pteridium aquilinum*. Many of these, not just the *Polypodium*, were growing as epiphytes. There were sufficient numbers of the *Dryopteris affinis* complex for a lively discussion. Paul Ripley explained the salient points of *D. affinis s.s.* and *D. borreri*, which we learnt to distinguish, and reference to a checklist derived from Christopher Fraser-Jenkins confirmed that *D. cambrensis* was also present, and once understood was quite easily recognised. Most plants were distinctive but there were still some that defied identification to species. We saw a few plants of *D. filix-mas*, and some of us wondered whether part of our difficulty with *D. affinis* agg. was because of the presence of hybrids in the *D.* × *complexa* group; however, we took no samples so this is only guesswork.

We had seen no filmies, not having entered the dense woods, but reaching the shore we began to explore some of the emergent streams, as there was informed speculation that these might harbour sporophytes as well as gametophytes of Killarney fern. Pressure of time forced us to abandon this but the habitat we saw looked very promising and might repay a more extensive search.

Sunday afternoon – Merkland Wood & Brodick Castle **Frank McGavigan**

(*Participants*: Tim Godfrey, Lindsey Holleworth, Jennifer Ide, Bridget Laue, Frank McGavigan, Chris Nicholson, Paul Ripley, Paul Sharp, Tony Smith.)

After lunch we again joined Tony Smith, this time in Merkland Wood (26/020383), where the main interest for us was *Dryopteris expansa*, normally a mountain species but which is also found in woods at sea level in western Scotland. The guidebooks give its distinguishing features as (a) flat pinnules (*D. dilatata*'s are curved downwards and *D. aemula*'s crimped upwards), (b) finely cut pinnules giving a lacy appearance, (c) scales a uniform brown-ginger colour but with an occasional darker stripe, and (d) basiscopic pinnules often much longer than the others. Easily identified then? Not a bit of it. The problem is that these descriptors are imprecise and subjective, and so we spent some time (until the midges got the better of us) deliberating on whether we were looking at *D. expansa* or *D. dilatata*. Were those pinnules flat? Maybe, or there again maybe not. Lacy appearance? Aren't most ferns lacy? At least the scales seemed to be uniformly brown-ginger, but did the odd darker stripe mean that plant was *D. dilatata*? Long basiscopic pinnules? They all seem to exhibit this feature but then Paul Ripley told us that the basiscopic pinnules of the lowest pair of pinnae had to be at least half the length of the pinna for true *D. expansa*, which immediately ruled out several plants. Then he told us that *D. expansa* readily hybridises with *D. dilatata*, and indeed he had it on good authority that in any patch of suspect *D. expansa*, 10% are true, 20% are *D. dilatata* and 70% the hybrid – *D.* × *ambroseae*. In the end we recorded all three, but take me back there now and I would be hard pressed to say with any confidence which was which.

Our final visit for the weekend was to Brodick Castle Gardens (26/017378), where we were shown round by our own Chris Nicholson, who once worked there, and Renée Mathieu, who still does. But first we had to check on the *Polystichum* × *bicknellii* that had been

identified on our last visit in 2005. It grows just inside the main gate along with *P. aculeatum*. Its other parent *P. setiferum* is currently not anywhere nearby. Another possible hybrid present is *Polypodium* × *mantoniae*, but as it's difficult enough distinguishing between its parents no one was bold enough to pronounce on the hybrid. Later we were happy with our identification of *P. interjectum* growing in the lime mortar of an old wall and also epiphytic in the adjacent tree. But we were really in the gardens to view Brodick's fine collection of exotics and garden cultivars, notably a magnificent stand of *Athyrium filix-femina* 'Victoriae'. Chris, who had been responsible for extending the collection of exotics, was keen to see how they had fared through the recent cold winters. *Dicksonia antarctica*, *Lophosoria quadripinnata*, *Thyrsopteris elegans* and *Culcita macrocarpa* had all come through well without protection. Cyatheas, as you might expect, had not done so well, and several had been replaced. Brodick has a fine collection of ground ferns too – *Osmunda*, *Woodwardia*, *Polypodium*, *Dryopteris*, *Polystichum*, *Athyrium* – but it is pointless rattling off a long list of names here: make the effort and go and see them for yourself.

photo: C. Nicholson

***Athyrium filix-femina* 'Victoriae' at Brodick Castle Gardens**

Paul Ripley, Jennifer Ide, Lindsey Holleworth, Renée Mathieu, Tim Godfrey & Frank McGavigan

This had been a fern-packed weekend, superbly organised by Chris Nicholson with the help of Tony Smith, and our grateful thanks must go to them both.

Perthshire – 15 September **Frank McGavigan**

(*Participants*: Tim Godfrey, Frank Katzer, Frank McGavigan, Mike Taylor.)

An e-mail out of the blue from Garry Kinmond asking for help in identifying the many ferns in his garden in Luncarty (37/095295), just north of Perth, was just the excuse we needed to slip in an extra meeting to our Scottish programme. Garry and his wife, Janis, own a beautiful and immaculate garden, which clearly had been laid out by a keen and knowledgeable plantsperson, and it turned out that the property had been owned by Mrs Elaine Borwick, a BPS member from 1982 until her death in 2005. Mrs Borwick obviously knew her ferns and had placed many fine specimens in among choice flowering and foliage plants. Nowhere do the ferns dominate but rather they complement the other plants – a lesson in good gardening.

On first glance the ferns seemed not unusual – *Cystopteris fragilis*, *Polystichum aculeatum*, *Adiantum venustum*, *Osmunda regalis*, to name but a few – but closer inspection revealed some rarer specimens – for example, a particularly heavily crested Grandiceps variety of *Dryopteris filix-mas* and a finely cut, exquisite *Polystichum setiferum* that made me drool with envy. None of us felt expert enough to name the varieties but we were able to label everything to species level, which, I think, satisfied the Kinmonds, though how they, as newcomers to ferns, will cope with the complexity of the scientific names, I'm not sure.

They were certainly very hospitable hosts, and I am sorely tempted to take advantage of this and return, trowel in hand, to beg a division or two.

We spent the afternoon visiting The Hermitage (37/013423), further north at Dunkeld. This is a favourite fern hunting ground, owned by the National Trust for Scotland and easily accessible, and we were soon ticking off the usual suspects: *Athyrium filix-femina*, *Blechnum spicant*, *Cystopteris fragilis*, *Dryopteris affinis* agg., *D. dilatata*, *D. filix-mas*, *Oreopteris limbosperma*, *Polypodium vulgare* (in the trees), the ever-beautiful *Polystichum aculeatum*, and of course *Pteridium aquilinum*. We had to hunt for *Phegopteris connectilis*, not finding it until our way back, but we had less luck with the *Trichomanes speciosum* gametophytes that Fred Rumsey had discovered here several years ago. This was the second time we had looked and the local VCR has also hunted, all to no avail. We need Fred to take us to the site and prove their existence!

We took advantage of the fine weather (in what had generally been a miserable summer) to walk on to Rumbling Bridge (27/996412). (There are at least two Rumbling Bridges in Scotland where in both cases an old stone bridge spans a deep ravine where the river is forced through narrow gorges and subterranean passages – hence the rumbling.) The bridge (showing some ominous cracks, perhaps from too much rumbling) held a fine display of *Asplenium ruta-muraria* and *Cystopteris fragilis*, with a solitary *Asplenium trichomanes*. On the walk there we noted *Equisetum arvense* and the much more attractive *E. sylvaticum*.

For a last-minute arrangement this had turned out to be a most satisfying day.

Bearsden, Glasgow – 29 September

Frank McGavigan

(*Participants*: Liza Downie, Adrian Dyer, Mary Gibby, Tim Godfrey, Alec Greening, Bridget Laue, Frank McGavigan, Chris Nicholson, Nadia Russell, Paul Sharp, Jamie Taggart, David Walkinshaw, Alastair Wardlaw, Maurice Wilkins.)

As has become normal, our end-of-season get-together was our most popular meeting of the year, this time at Alastair and Jackie Wardlaw's garden just outside Glasgow. The opportunity to socialise and eat delicious food (Jackie's cheese scones are legendary) are clearly stronger draws than merely viewing ferns. However, we did look round Alastair's fern collection, which was as ever in pristine condition. He no longer holds the National Collection of British Native Ferns, but you would hardly notice as he still has representatives, as far as I could tell, of all the native species, with the exception of the impossible to cultivate *Cystopteris montana*. He also has a wide selection of cultivars and hardy exotic ferns, among which I again admired *Polystichum nepalense*. Does anyone know where I can get hold of one?

photo: P. Sharp

***Osmunda regalis* in Alastair Wardlaw's Garden, Bearsden**

Alec Greening, Adrian Dyer, Frank McGavigan, Tim Godfrey, Maurice Wilkins, Nadia Russell, Alastair Wardlaw, Mary Gibby, Chris Nicholson, Bridget Laue, Liza Downie

Indoors we were treated to two interesting presentations: the first from Paul Sharp on 'Impacts of DNA-sequencing on fern taxonomy'. The title might sound soporific but let me tell you the content was fascinating, and he was urged to write up the presentation for publication in one of the Society's journals so it could be appreciated by a wider audience. After lunch, Alec Greening beguiled us with an account of his visit to the Cook Islands, illustrated with superb fern photographs taken by his wife, Linda.

Over lunch we had the opportunity to buy ferns that we had all brought in. There was an eclectic mix but everything a bargain with no price above £2, but unfortunately for me no *Polystichum nepalense.* Where can I get that fern?

We finished the day with a discussion of possible places to visit next year – some new, some old favourites – and an agreement that we would set up a small group to manage the programme.

SOUTH-EAST

Cultivar Meeting at Julian & Margaret Reed's House, Kent – 1 September

Pat Acock

Twenty-two members gathered to view Julian's garden in Kemsing near Sevenoaks. I was fortunate enough to see it last year and could only marvel at how it had developed since then. Julian started just two years ago with a run-down, weed-inundated, dilapidated garden. He has renewed all the boundary fences to minimise encroachment of weeds from neighbours' gardens. A lawn has been established, and beyond this grass paths give access to the extensive fern beds, which are shaded by a tall fence and lightly shading trees. The soil has been extensively improved with humus and the ferns surrounded by a good depth of chipped bark, which not only sets them off splendidly but also helps to suppress the weeds and enable those that do show to be fairly easily removed.

Julian's fern collection has built up over a number of years and includes a wealth of the best cultivars e.g. of *Blechnum spicant* and *Asplenium scolopendrium*, as well as some quality hardy fern species from around the world. Besides all the mature plants, Julian grows vast numbers of ferns from spores and experiments with mixed sowings of choice cultivars to good effect. Julian generously parted with surplus plants.

photo: M.H. Rickard

Peter Tindley & Paul Spracklin at Julian Reed's Garden, Kemsing

Julian had hired the local hall to accommodate the large group for a much appreciated meal prepared by Margaret and himself, followed by two really interesting talks. Martin Rickard gave an enthusiastic and well illustrated talk on the history of cultivars right up to 2012, pinpointing the highlights. Showing an unusual *Polystichum lonchitis* that he had discovered on the recent German excursion, he rounded off with a plea for us to look out for cultivars in the wild. The second interesting and informative talk was given by local member Jude Lawton. Jude's illustrated account of the history and development of Plant Heritage (formerly NCCPG) and her part in it locally was very well received.

We returned to Julian and Margaret's house for a cream tea, a final look at the garden, and a last chance of availing ourselves of Julian's ferns as well as large numbers of surplus plants that other members had brought. This was a meeting that Julian had conceived and

organised himself, and it was great to see the somewhat neglected subject of fern cultivars not only bringing in a large and wide audience but being greeted with such enthusiasm. Having a newer and younger member taking this lead augers well for the Society's future development. We expressed our grateful thanks to both Julian and Margaret who had worked tirelessly throughout the day.

Brede High Wood & Stephen & Karen Munyard's house, Hastings, East Sussex – 3 November **Paul Ripley**

Nine members met about five miles north of Hastings at Brede High Wood car park, 51/803207; others had gone to Mark Border's house to avail themselves of his kind offer to part with ferns he would no longer be able to house when he moves. Brede High Wood was acquired by the Woodland Trust five years ago. It covers 262 hectares, with areas of ancient woodland, mixed secondary woodland, some chestnut coppice, conifer plantations and areas of heathland. The Woodland Trust's admirable policy of open access makes this large area easy to explore, but in fact we did not stray far from the car park.

We soon found an area containing much of interest: *Dryopteris dilatata* (in abundance of course), *D. carthusiana*, *D. filix-mas*, *D. affinis*, *D. borreri*, *Athyrium filix-femina*, *Blechnum spicant* and, surprisingly in this acid wood, *Polystichum setiferum*. There were two distinct morphotypes of *Dryopteris borreri*, a 'standard' form with well spaced pinnules, and a more foliose form. A large, upright, narrow-fronded fern was a very strong candidate for *D.* × *complexa*, and two strange foliose plants may have been *D.* × *critica*.

After a detour to see abundant blechnums in a chestnut coppice, we made our way to Stephen and Karen's house, where a fantastic lunch (complete with printed menu and 'waitress' service) awaited us.

By this time we were sixteen, and after a tour of Stephen and Karen's garden, full of surprises and interest, we were treated to a talk by Howard Matthews, who was attempting to trace the current owners of a fern variety he once distributed to members, and presentations by Tim Pyner (the BPS trip to South Africa), Bryan Smith (BPS meeting in Austria/Germany), Roger Golding (a compilation of topics including visits in search of *Diphasiastrum* × *issleri* and *Dryopteris pseudodisjuncta* in Kirkbean Glen), Stephen Munyard (ferns in a remarkable limestone area in Canada) and Paul Ripley (recent trip with Pat Acock to Réunion). Finally, Pat Acock showed slides from a recent visit to The Netherlands, where the South-East group are planning a long weekend meeting in August 2013.

Needless to say, tea and fabulous cakes helped us on our way, and we are extremely grateful to Stephen and Karen for their hospitality.

SOUTH WALES AND THE BORDERS

Gwynedd & Conwy, North Wales – 29 June – 1 July **Brian & Sue Dockerill**

Friday – Dick Hayward's Garden, Caernarfon, Gwynedd

Our first visit was to Dick Hayward's garden in Caernarfon and was blessed with dry weather. Situated running down to the Menai Strait, it was both exposed and mild and, having several large trees, it provided good growing conditions for a wide variety of ferns both in the ground and in a small polycarbonate shelter.

The first area we saw was a narrow path between the side of the house and the boundary fence. On either side of this path were planting areas, one a raised bed and the other a gravelled area with plants in pots. Notable in this area was *Arachniodes rhomboidea* with lovely pale green fronds of a distinct triangular shape and upright habit. Eye-catching for its huge, leathery, arching fronds was *Polystichum squarrosum*, while at the other end of the scale there was *Athyrium reflexipinnatum* with small, upright narrow fronds with a greyish overlay.

In the main garden there were central, sunny beds, but all around the edge were more shady beds in which ferns were well represented. Several *Dryopteris* species caught my eye – *D. formosana* with black scales and contrasting yellowish new fronds, and similarly dark-scaled but with a dense arching habit and twisted pinnules was *D. kuratae*. Looking extremely dainty near a small pool was *Pseudophegopteris levingei* with pale green, feathery fronds and dark, thread-like stipes. I was really pleased to see a large patch of *Microsorum pustulatum* growing above some steps to a lower level of the house. I have killed this fern in the open garden, but it does well in a pot. The size and vigour of this patch was testament to the benign nature of this garden and the skill of its owner, as were the ferns in a small polycarbonate greenhouse. Many of these were collected on Dick's trips abroad and are too numerous to mention, but polypodies and their near relatives were well represented, along with adiantums.

After a welcome cup of tea and slice of cake, we thanked Dick and Judy for being such kind and welcoming hosts and made our way to Criccieth.

Saturday – Gwydyr Forest, Conwy & Cwm Idwal, Gwynedd

Unfortunately the group's planned Saturday visit to Cwm Llefrith had had to be cancelled as Dewi Jones, our leader, had advised us that the conditions and the forecast weather made it unsafe. After considerable discussion, we decided to bring forward the plans previously made for the Sunday. Therefore at 10a.m. ten members met north-west of Betwys-y-Coed at a car park by Llyn Sarnau in the Gwydyr Forest at 23/778591. We followed the forest road leading from the north end of the car park, passing *Pteridium aquilinum*, *Athyrium filix-femina*, *Dryopteris dilatata* and *D. affinis* agg. before seeing our first highlight, a substantial clump of *Osmunda regalis*. Recognised only through binoculars on the outward walk, the royal fern's identity was confirmed on our return by Dick Hayward, who risked the boggy ground and reported the presence of fertile fronds.

We followed the road downhill to our objective, a lead mine at 23/781584 where the spoil heaps had been colonised by *Asplenium septentrionale*; even our most experienced members regarded the numbers of plants as exceptional. The heaps also had *Dryopteris oreades* and, as *D. affinis* and *D. filix-mas* were also present, this provided a perfect opportunity to learn the distinguishing features of the species. Nearby was *Blechnum spicant* and, in the adjacent woodland, *Polypodium vulgare*. Elsewhere on the heaps a single plant of *Cryptogramma crispa* was found and the ruins of the mine buildings had *Asplenium ruta-muraria*, *A. adiantum-nigrum*, and plants regarded as good candidates for *A. trichomanes* subsp. *trichomanes*. The hunt was on for hybrids but rain soon dampened the fruitless search.

After lunch in a café on the edge of Capel Curig we proceeded to the National Park car park at the western end of Llyn Ogwen at 23/649604. Although the rain was becoming more frequent, we decided to walk up the well made path, passing to the west of Llyn Idwal, aiming to look at the lower rock piles below the Devil's Kitchen. After seeing *Asplenium ruta-muraria* on the car park walls, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. dilatata*, *D. filix-mas*, *D. oreades*, *Oreopteris limbosperma* and *Pteridium aquilinum* were all seen from the lower reaches of the path. Higher up, *Cryptogramma crispa*, *Diphasiastrum alpinum*, *Huperzia selago* and a single plant of *Lycopodium clavatum* were noted.

Once on the rocks we quickly saw *Asplenium trichomanes* subsp. *quadrivalens*, *Cystopteris fragilis*, *Gymnocarpium dryopteris*, *Hymenophyllum wilsonii* and *Phegopteris connectilis*. But by now, with the wind, the rain had become horizontal – "great lumps of water" as one member described it, and all but four of the party headed back to the cars. Those of us who remained climbed some way up the rocks and were rewarded with many plants of the higher altitude species plus *Asplenium viride* and *Selaginella selaginoides*. Conditions were, however, very poor and we returned soaked. The group meal in Criccieth, attended by 15 members, was all the more enjoyable after a good shower of the warmer type!

Sunday – William Hughes' garden & Carreg y Fran, Gwynedd

Our second garden visit was to William Hughes' garden near Criccieth. The weather was unexpectedly kind and our host very welcoming. William's is a garden where level ground

is at a premium, much of the ground going steeply up with narrow paths cut in the hillside to give access. The whole garden is shady, either due to native trees at the top of the slope or the interesting small trees that William has planted. The ferns obviously love it. *Arachniodes standishii* was sporing into the steepest banks, *Cystopteris moupinense* was filling a half barrel with its bright green fronds and *Polystichum* × *dycei* was growing prodigiously – too prodigiously for William, and several visitors took a plant home. As we snaked our way up and down the slope William pointed out the more interesting ferns. I was not always within earshot, but a flavour of this fascinating garden can be gleaned from a few snippets: *Todea barbara* growing outside without protection, a crested *Blechnum spicant* sporing along a path, *Polystichum tripteron* with its interesting leaf shape, *Lastreopsis* poking through a sea of *Adiantum* at the base of some steps and *Woodwardia martinezii* (a new species to me) obviously growing well outside.

After a welcome break for tea and biscuits, we thanked William and dispersed either for lunch or for home.

The six remaining members were lucky enough to be led by William onto the cliffs of Carreg y Fran at 23/736448, north-east of Ffestiniog. Access to the area was surprisingly easy as the route marked on the map proved to be a well made tarmac road, the result of its use during the Second World War to transport art treasures from the museums of London to the nearby quarries.

After walking north along the road from our parking site we ascended to the western end of the cliffs. These were steep and we were only able to survey the lower levels and some gullies, however, we were able to find, in sequence: *Huperzia selago*, *Lycopodium clavatum*, *Blechnum spicant*, *Athyrium filix-femina*, *Asplenium trichomanes* subsp. *quadrivalens*, *A. viride*, *Phegopteris connectilis*, *Asplenium adiantum-nigrum*, *Cystopteris fragilis*, *Dryopteris oreades*, *Polypodium cambricum*, *Dryopteris dilatata*, *Asplenium septentrionale*, *A. ruta-muraria* and *Polypodium vulgare*. The *P. cambricum* was too inaccessible for us to examine but had been sampled and confirmed by William's father several years previously. In one area of vertical cliff the aspleniums were growing in close proximity to one another but a search for hybrids proved fruitless. On reaching the eastern end of the cliffs we descended back to the road. We had seen a very remarkable collection of ferns in a small area and thanked William profusely for an excellent conclusion to our weekend.

Garden visits, Carmarthenshire – Wednesday 15 August **Sue Dockerill**

Seventeen of us met at the garden of local member Susan Lewis in Glanamman in Carmarthenshire (22/671129). Due to the wet weather the warm drinks and cakes were very welcome, but eventually we braved the elements to look at the ferns.

Susan has a very wet and acid Welsh hillside garden and ferns obviously love it. In the main fern bed there was a *Woodwardia unigemmata* at least six feet across and equally giant forms of *Asplenium scolopendrium* looking very lush. This bed also contained several fine *Polystichum setiferum* varieties and a healthy patch of *Blechnum wattsii*, perfectly hardy in this garden. Even wild sporelings of *Dryopteris affinis* and *D. dilatata* growing in the boundary hedge made striking specimens. In a very wet seep, damp-loving plants were battling it out and amongst these were several *Athyrium filix-femina* more than holding their own. Not surprisingly, osmundas were doing well, with *Osmunda regalis*, its crested form and *O. cinnamomea* all looking good. Around a medium-sized pool a fantastic stand of *Equisetum hyemale* caused much comment and even persuaded some people to take a small piece home.

Susan grows many ferns from spores and runs a small nursery, so we were enticed into her polytunnel not only for the shelter but also to potter amongst the ferns on offer.

After the short trip to Aberglasney Gardens (22/581221) we had lunch and by this time the weather had brightened considerably. We were met by the head gardener, Joseph Atkins, and two of his student gardeners, our aim being to help them to identify and map the ferns

in the garden. A complete list was prepared showing at least 30 taxa, and highlights included a very fine *Athyrium filix-femina* 'Victoriae' and a lovely stand of *Thelypteris noveboracensis*. These were both in the area known as Bishop Rudd's Walk, and the biggest variety of ferns was in this section of the garden. A raised bed behind the house was also home to large specimens of many ferns and the wilder Pigeon House Wood contained sundry native ferns in a natural setting.

The student gardeners were very interested in increasing their knowledge of ferns and also in joining the BPS, so it was a successful visit all round. Our thanks must go to Susan for both hosting the morning visit and sharing her very interesting garden with us, and in making the arrangements with Aberglasney for our fruitful afternoon.

Monmouthshire: Woods near Chepstow & Dewstow Gardens – Tuesday 18 September

Sue Dockerill

Fourteen members assembled west of Chepstow at the car park for St Pierre's Great Wood (31/504933), where Brian Dockerill outlined the plan for the day. He explained that this wood had been selected in part because it was not very ferny, as this might allow us to look at the *Dryopteris affinis* complex without being overwhelmed. As a start for this, frond samples had been collected of 'typical' *D. filix-mas*, *D. affinis* and *D. borreri* to allow these to be compared. Pages from the late Ken Trewren's material 'Some taxa within the *Dryopteris affinis* complex' showing plants that we might expect to see were distributed, along with copies of a table listing the key features of each.

Armed with this knowledge, we set off on the main path, which was fringed with *Pteridium aquilinum*, and soon reached a seat where all three *Dryopteris* could again be seen, this time growing with *D. dilatata*, *Athyrium filix-femina* and *Asplenium scolopendrium* (the only hart's tongues we were to see in this part of the wood). We continued on to a cleared area where, as well as the previous ferns, we also saw *Blechnum spicant* and *Dryopteris carthusiana*. As the latter was growing in with copious amounts of *D. dilatata*, some members looked for *D.* × *deweveri*, although no definitive specimens were found. In this area we also found a candidate for *D. affinis* subsp. *paleaceolobata*, which we spent some time studying.

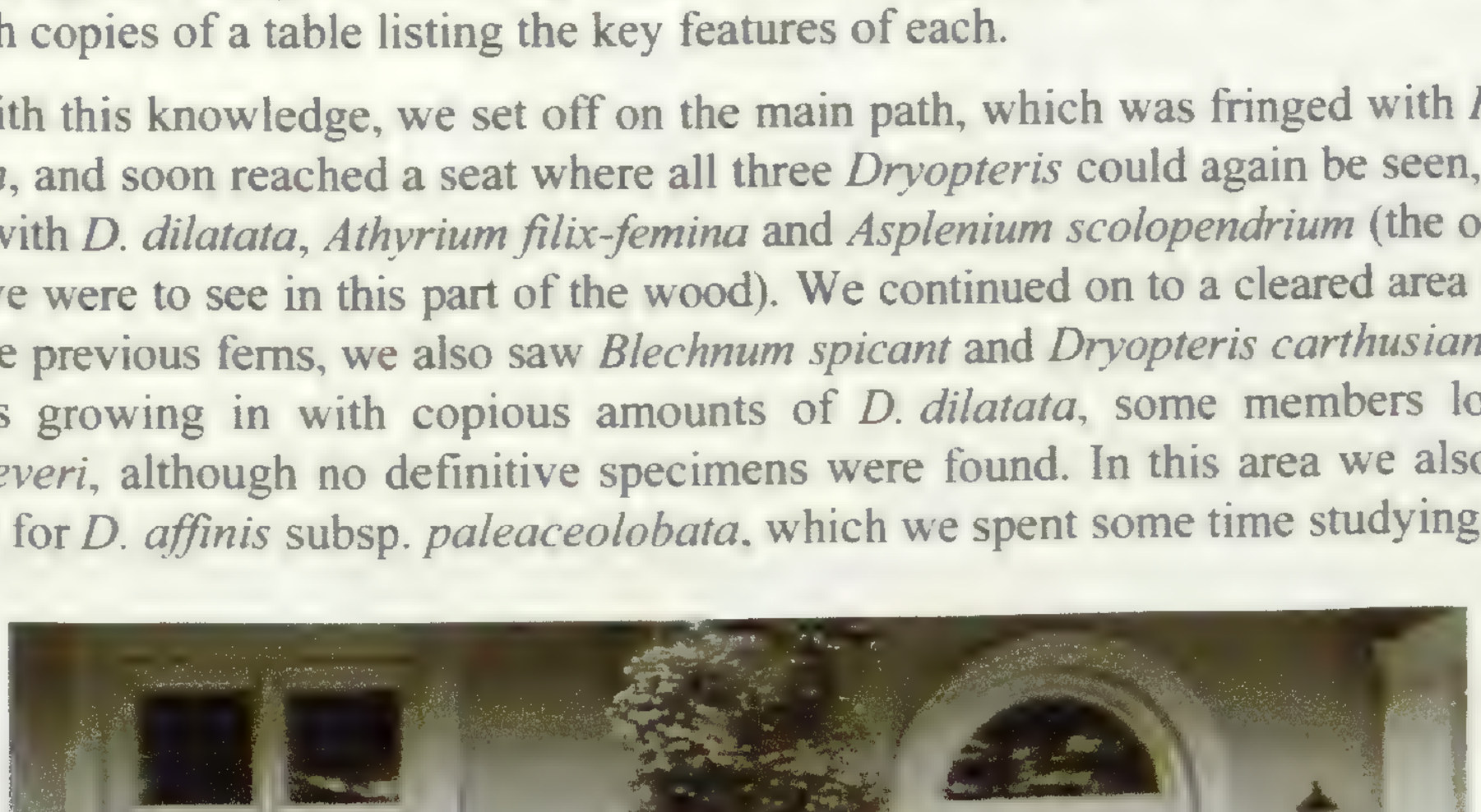


photo: J. Crowe

Dewstow Gardens

Sue & Roger Norman, Christine Mullins, Rosalie Clay, Susan Lewis, Martin Rickard, Sue Dockerill, Joy Neal, Brian Dockerill, Tim Brock, Jonathan Crowe

Stopping to examine some wild madder on the way, we then headed off the main path into a wetter, more alkaline section where the first few *Polystichum aculeatum* and *P. setiferum* were seen, along with banks of *Asplenium scolopendrium*. The autumn crocus, *Colchicum autumnale*, was a welcome sight growing in patches alongside this path. There were also some very fine *Dryopteris affinis* and *D. borreri* in these moister conditions, and a candidate for *D. borreri* morphotype 'robusta', although closer inspection suggested it was more probably one of the *D.* × *complexa* hybrids.

After lunch, we made our way down quiet lanes past *Polypodium vulgare* and *Asplenium adiantum-nigrum* to a wetter part of the nearby Great Barnets Wood (31/512934). Although many of the ferns seen in the morning were also present here, the dominant ones were *Asplenium scolopendrium*, *Polystichum setiferum* and *P. aculeatum*. A couple of candidates for *P.* × *bicknellii* were also found, along with some twisted rachis and cruciate forms of *P. setiferum*.

After making our way back to the cars, we made the short trip to Dewstow Gardens (31/467888), a recently restored Victorian garden near Caldicot, with extensive Pulhamite grottos and tunnels. After a welcome stop for tea, we spent a pleasurable hour or so looking at the ferns both in the grottos and in the outside garden. Although some in the Pulhamite were struggling in these artificial conditions, those in the garden were thriving and it made an enjoyable end to an interesting day.

WESSEX

Boldre, New Forest, Hampshire – Inaugural meeting of the new Wessex regional group (joint meeting with the South-East group) – 12 May

(Leaders: Jo & Ashley Basil) **Paul Ripley**

Ten members, including four from the Wessex area, assembled on a beautiful spring day at Jo and Ashley Basil's house in Boldre, near Lymington, in the heart of the New Forest. We walked round the village, and found *Polystichum setiferum*, *Athyrium filix-femina*, *Dryopteris dilatata*, *D. carthusiana*, *D. filix-mas*, *D. borreri* and *D. affinis*, *Pteridium aquilinum* and *Polypodium interjectum*. The *D. affinis* was abundant at an SSSI owned by Southern Water (40/321989) and was looking resplendent as the rich brown-scaled croziers unfolded. *Equisetum arvense* and *E. palustre* were found in an adjacent meadow owned by the Hampshire and Isle of Wight Wildlife Trust.

After lunch, we drove a short distance to Howe Copse (40/327998) in Roydon Woods to find *Dryopteris aemula* and numerous *Blechnum spicant*, in addition to all the species seen earlier; *D. carthusiana* was more numerous here. We then went on to South Baddesley (40/353967) where we saw a considerable amount of *Equisetum* × *font-queri* and its parents, *Equisetum telmateia* and *E. palustre*.

photo: A. Basil

Paul Ripley, Jo Basil, Tim Pyner, Mike Hill, Mike Rowe, Pat Acock, Peter Clare, Paula Campbell, Roger Golding & Michael Radley on Boldre Bridge

This site had been found by Mike Rowe in 1991. Identification was confirmed by Pat Acock, and so Mike, who was a member of our party, was saved any embarrassment! On the wall by St Mary's church we admired *Asplenium adiantum-nigrum* and a large, lush colony of *A. ruta-muraria*. Many of us photographed green-veined orchids in the churchyard. Further along the lane small numbers of *Equisetum arvense* were seen, and *Polypodium vulgare*, together with *Asplenium adiantum-nigrum*, featured on the roadside banks.

The meeting finished with traditional tea and cakes kindly provided by Jo Basil. We are grateful to Jo and Ashley for their hospitality and organisation and planning of a thoroughly enjoyable and rewarding meeting, and also to Mike Hill and Jo for initiating the Wessex group. Unfortunately, Mike leaves for a two-year teaching stint in China (we wish him well) but the Wessex regional group clearly fills a need and we wish it every success.

Isle of Portland, Dorset – 14 July — Mike Hill

The 14th July turned out to be one of the wetter days of a very wet summer in the South-West, with yellow warnings for rain, and several people had to cancel. But despite this a handful of hardy types turned out in the rain for the Wessex Group's second meet, at Portland, Dorset. Steve and Karen Munyard, Jo and Ashley Basil, Heather Clark and Mike Hill met at The Heights Hotel. Unfortunately, the appalling weather meant that the excursion was greatly truncated but we did get to see a small number of sea spleenwort, *Asplenium marinum*, growing well above the sea on cliffs at Freshwater Bay (30/6904.7007).

Walking north along the coastal path from Rufus Castle, we found abundant large plants of maidenhair fern, *Adiantum capillus-veneris*, growing along the sides of a cutting (30/700713) where they were sheltered from exposure. Some of us walked down a steep path to the edge of the sea, where the landscape was littered with large limestone boulders (30/7041.7159). Several of these boulders held healthy populations of *Adiantum* growing as lithophytes in small pits in the rock, apparently a most inhospitable place for a fern. It would be worth returning in better weather to get a better idea of the population of this lovely plant.

YORKSHIRE FERN GROUP

Bingley, West Yorkshire – 10 March — Bruce Brown

photo: A.J. Evans

Mike Canaway, David Tennant, Bruce Brown, Mike Wilcox & Jesse Tregale at the historic *Trichomanes speciosum* site

Somewhere near to Bingley is a famous historical site for *Trichomanes speciosum*. It was first discovered by a Dr Richardson in 1724, in a dark crevice under a dripping rock below a well named after its adjacent elms and visited for the purity of its water. But over the next 60 years, due to collecting and work at the well causing a change in hydrology, the fern sporophyte declined; it was last recorded in 1785, then disappeared. More recently, Fred Rumsey carried out

scientific investigations into the *Trichomanes* life-cycle. He found only gametophyte populations around here, with no evidence of gametangia production. A couple of local fern group visits confirmed this; in fact gametophyte colonies are quite common, even luxuriant, in several places throughout the Aire Valley and adjacent parts of West Yorkshire.

But excitingly, Jesse Tregale visited the site in March 2011 and found several sporophytes about five centimetres in length, growing in what we consider to be the historic 'dark crevice'. The find was confirmed by other group members and Fred Rumsey informed us that the new plants were similar to some of the 1785 herbarium specimens. Six of our members returned in March 2012 and by comparing photographs from 2011 we could see that active growth in the *Trichomanes* was occurring, with frond enlargement and some tiny new sporophytes developing out of a small mound of gametophyte. One feature of the site is the head-high blanket of alien balsam (*Impatiens glandulifera*) that surrounds the *Trichomanes* in high summer, which we feel could be helpful in providing humidity in dry conditions and deterring casual visitors.

The rest of the day might be seen as an anti-climax, but the early spring sunshine was pleasant as we followed the riverside in Bingley (44/104395), noting good clumps of *Polystichum aculeatum* and light green early fronds of *Athyrium filix-femina*. We then moved on to Harden Beck and Goitstock Wood (44/088378). The beck-side track passes a caravan site where *Dryopteris erythrosora* was spotted naturalised away from a planted area. Goitstock Wood has many ancient woodland indicators and here Harden Beck has carved out a gorge with waterfalls. Fred Rumsey had mentioned unconfirmed reports of *Dryopteris aemula* here, but we were not lucky in finding any, having to make do with resplendent clumps of *Blechnum spicant*, *Dryopteris borreri* and one nice *Polystichum setiferum*; oh – and also that fuzzy green *Trichomanes* gametophyte lurking under a few boulder overhangs.

Moonwort survey, Redmire, Grinton, Yorkshire Dales – 26 May Barry Wright

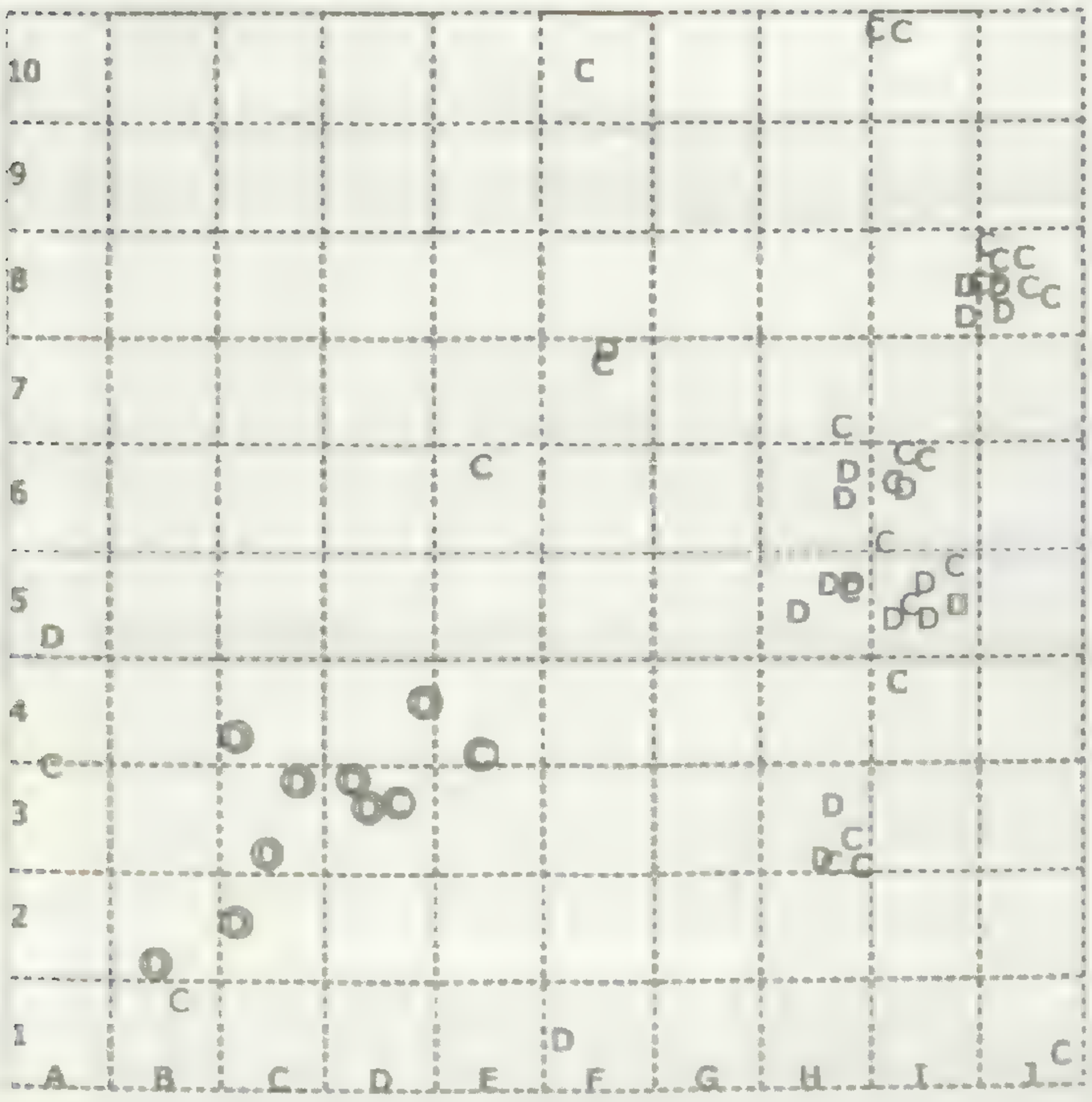
The moonwort (*Botrychium lunaria*) survey this year was a follow-on from 2011, monitoring the ten fixed quadrats established in 2009 along the Grinton to Redmire road (around 44/039965) plus the two new quadrats (267 and 269) added in 2011 that incorporated both adder's tongue (*Ophioglossum vulgatum*) and moonwort to investigate the dynamics of the two species over time.

		Quadrat no.											Quadrat no.		
		230	**231**	**232**	**233**	**236**	**322**	**323**	**324**	**325**	**326**	**Total**	**267**	**269**	**Total**
Moonwort	2009	**11**	**6**	**0**	**11**	**39**	9	9	27	15	12	**139**	-	-	
	2010	20	10	3	27	75	22	4	24	17	11	**213**	-	-	
	2011	24	12	2	13	51	18	4	47	39	21	**231**	18	6	**24**
	2012	22	4	3	8	52	14	6	21	39	13	**182**	27	10	**37**
	Average	**19**	**8**	**2**	**15**	**54**	**16**	**6**	**30**	**28**	**14**		**23**	**8**	
Adder's tongue	2011												2	3	**5**
	2012												8	4	**12**
	Average												**5**	**4**	

The 2012 data continued to reveal considerable variation between quadrats and between years as shown in the table below. The original ten quadrats are to the left and the ones with adder's tongue to the right. Quadrat 236 was again the most populated quadrat with an average of 54 spikes per year but showing variation from 39 to 75 between years. The majority of quadrats had a poor year in 2009 and increased and maintained relatively stable

populations in 2010 and 2011. Half of the original quadrats were fairly stable between 2011 and 2012, the rest of them declining significantly, but both extra quadrats showed a good increase. The adder's tongue in the extra quadrats had also increased.

There seems to be no logical reason why only some quadrats vary so much year on year. We'll just have to keep getting more data!



The general pattern of distribution remains variable. Most spikes occur within the same general area and many quadrats demonstrate sporadic outlying spikes that can crop up anywhere within the quadrats. To the left is the plot of quadrat 267 for 2011 and 2012. Note the 2011 (C) outliers in cells A3, B1, E6, F10, I10 and J1 and the 2012 (D) outliers in A5 and F1.

Records for quadrat 267 for 2011 (C) & 2012 (D); circled letters are adder's tongue records

For those that are interested (or can at least muster feigned interest) below is a quadrat in the process of being installed.

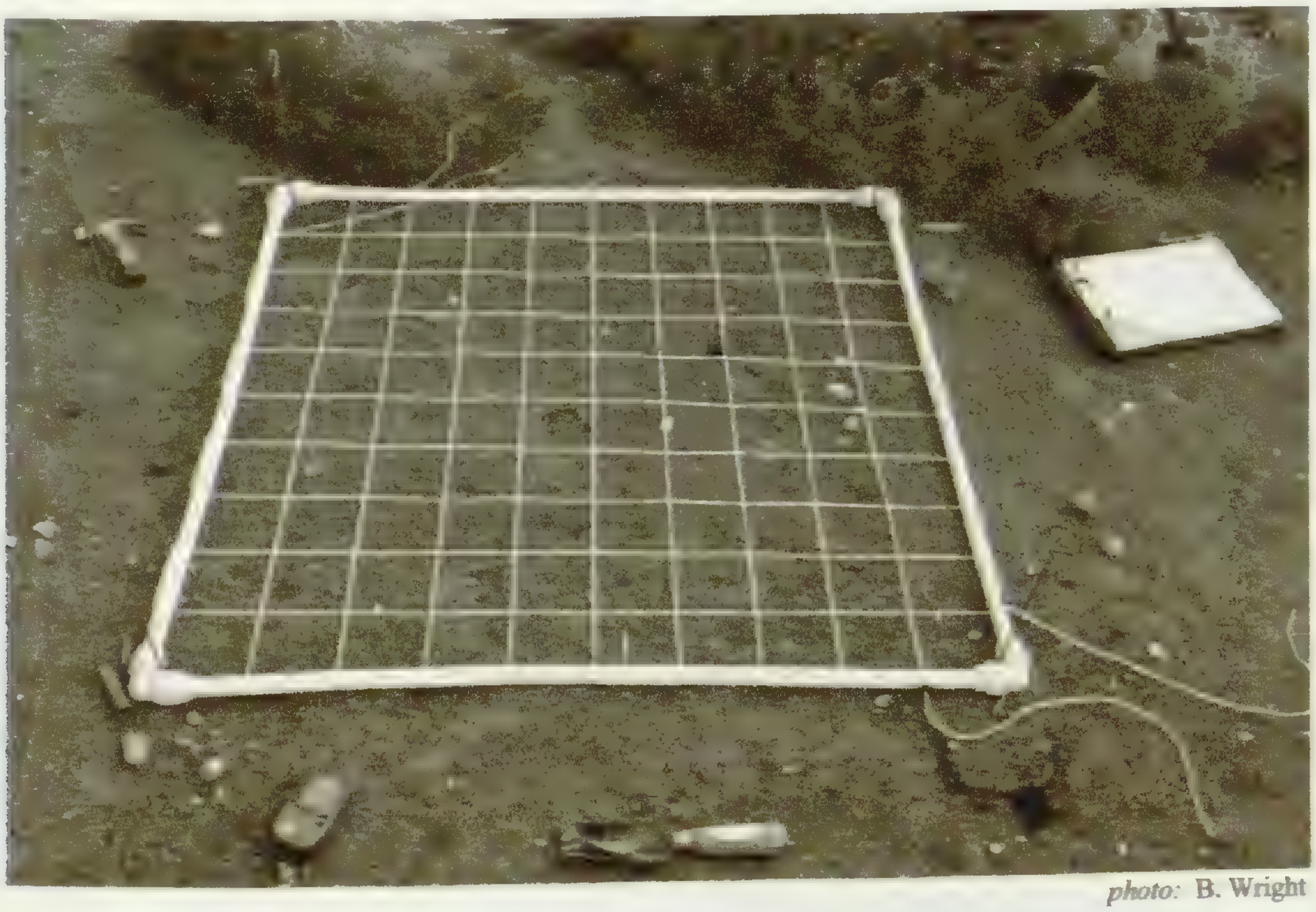


photo: B. Wright

Quadrat installation kit

GPS, quadrat with elastic cord dividers, spikes and tent pegs to hold it in place, copper pipe hammered in (using cute dinky hammer for wimps!) to permanently mark each corner, sawn-off trowel to cut turf flap (bottom right) to take 100mm × 100mm galvanised steel mending plate to act as a bigger target for the metal detector, clipboard, and Bruce's lunch pack in the heather.

Lincolnshire woodlands & Binbrook Nursery – 14 July

Alison Evans

We started the day just north of Market Rasen in Osgodby Wood, parking at the end of a woodland track at 53/0938.9248. We immediately recorded *Dryopteris dilatata*, *Pteridium aquilinum* and *Equisetum arvense*. Osgodby Wood has an interesting history, being part old woodland, part pre-war plantation and part post-1950 plantation. We walked along the track, noting male fern and lady fern, then branched off to the left beside a wet gully where we found *Oreopteris limbosperma* at 53/0967.9230 and *Blechnum spicant* at 53/0969.9234. Returning to the main path we explored some areas of deciduous woodland, where we added to the record *Asplenium scolopendrium* at 53/0935.9202 and *Polystichum setiferum* at 53/0930.9200. In areas of wet woodland we looked for *Dryopteris carthusiana*, feeling that it should be there, but found only *D. dilatata* and one possible *D.* × *deweveri* at 53/0916.9233.

photo: A.J. Evans

Neil Timm, Sylvia Garbet, Bruce Brown & Michael Wilcox by *Equisetum telmateia*

From Osgodby Wood we took a scenic route to Neil Timm's nursery at Binbrook, stopping to admire a large stand of *Equisetum telmateia* at 53/1172.9478. At Neil's we were supplied with tea, coffee and biscuits whilst we ate our packed lunches in the conservatory. Many thanks to Neil and his parents for their hospitality. We were then able to tour Neil's garden, which had matured considerably since our last visit, and provides varied habitats for an extensive collection of ferns and cultivars. In the fern nursery we were able to see all the stages of propagation and quiz Neil on how he goes about producing such beautiful, healthy plants. Most of us could not resist the temptation to add to our fern collections!

In the afternoon we visited the nature reserve at Linwood Warren, 53/1331.8760. An entomological survey was going on, and we met the warden, Brian Oxborrow, who encouraged us to add new records for the site. Our circular walk took in woodland, where we saw *Dryopteris carthusiana* in profusion (53/1296.8771) and a possible *D.* × *deweveri* (53/1297.8769). We also noted *D. dilatata*, *Blechnum spicant* and *Athyrium filix-femina*. Moving on to a wetter area we found *Oreopteris limbosperma* and *Equisetum arvense*, also noting a large stand of mare's-tail, *Hippuris vulgaris*, in a pond. Soon after this we found ourselves in a head-high stand of bracken, in fact more than head-high for some of us. In an area of drier woodland we found male fern, and a plant of *Dryopteris borreri* at 53/1318.8745. Several of us took photos of a large black and yellow longhorn beetle, which we observed laying eggs in a fallen log. This was identified for us from our photos by a member of the entomological party as *Strangalia quadrifasciata*. A further non-ferny point of interest was the reindeer moss, at the southern limit of its distribution. We searched an area of heathland for clubmosses, which had previously been recorded there, but did not find any. Our day finished in lovely warm sunshine. Both possible *D.* × *deweveri* plants were later confirmed microscopically.

Yorkshire Wildlife Trust Reserve, South House Pavement near Horton-in-Ribblesdale, North Yorkshire – 11 August

Alison Evans

We are very grateful to Helen Sergeant, who arranged for us to meet and park at Borrins Farm, 34/784748. South House pavement is a short walk through the fields from the farm.

A previous survey of about half the site found 14 confirmed fern taxa, listed for us by Mike Canaway, plus a possible *Polystichum setiferum*. Brian Burrow told us that there is an old record for *Polystichum lonchitis* on the site, so we set out to re-find all these previous records, and also to see if we could add to the list of angiosperms recorded.

photo: C. Evans

South House Pavement

Jesse Tregale, Helen Sergeant, Alison Evans, Mike Canaway, Bruce Brown, David Nelson, Michael Wilcox (*sitting*) Denise & Roy Copson, Roger Golding

Dryopteris filix-mas was our first find, by the gate into the reserve at 34/7756.7440, and we soon added *Asplenium scolopendrium*, *A. ruta-muraria*, *Polystichum aculeatum* and *Cystopteris fragilis*. Close by we found *Asplenium trichomanes*, *A. viride* and *Dryopteris submontana*, all to the left of the path into the reserve. We decided to explore the northern part of the pavement first, so turned to our right after noting the *Allium oleraceum* at 34/7754.7439. The bracken around the edges of the pavement was spreading into the grykes, and we noted that volunteers had been at work pulling it out. Our next finds were several colonies of *Polypodium*, several too immature to be certain of the species, but on previous visits Bruce Brown had found most of them to be *Polypodium vulgare*. A typical *P. vulgare* was found at 34/7755.7449. We debated the identity of a scaly male fern at 34/7752.7445 and decided that it was probably an odd-looking *Dryopteris borreri*. We found a few colonies of *Gymnocarpium robertianum*, but it was not as plentiful as we had expected. In the wooded area at the north end of the pavement we found a patch of *Polypodium* (34/7747.7473) that we thought was the *P.* × *mantoniae* previously confirmed microscopically by Bruce, but samples of this colony proved to be *P. vulgare*. [The confirmed *P.* × *mantoniae*, missed on this visit, is actually at 34/7755.7444.] There was another scaly male fern at 34/7748.7470, which we thought was either *Dryopteris borreri* or *D.* × *critica*. Later examination of the spores showed them to be mostly good, suggesting that it was the former.

We had our lunch sitting on the rocks, with spectacular views across to Pen-y-Ghent. We planned to walk back along the grassy area to the west of the pavement to reach the other part of the reserve more quickly, but the temptation to explore more grykes for the elusive

holly fern was too great for some. There was a more acid-loving selection of plants in some of the turf, and we added *Athyrium filix-femina* and *Dryopteris dilatata* to our list. When we reached the southern part of the pavement we started to see much more *Gymnocarpium robertianum* and *Dryopteris submontana.* We also noted *Polypodium interjectum* at 34/7757.7415. Walking on the pavement was quite tricky as it was grassed over in places, covering the holes between the stones, so there were a few falls but fortunately no serious injuries. In one case the fall was whilst trying to examine narrow-leaved bitter-cress, *Cardamine impatiens*, growing in a gryke. Bruce told us that he has also fallen into a gryke whilst trying to examine this rare plant! Quite close to this at 34/7756.7422 we found a *Polystichum* that we thought might have given rise to the possible *P. setiferum* record, as it was large and had stalked pinnules. We concluded that it was a candidate for *P.* × *bicknellii*, and this proved to be the case on later examination of the spores. This made up a little bit for not finding any *P. lonchitis.* We retraced our steps to Borrins Farm, thanked Helen and Mike for a very good day's ferning, and left the farmyard carefully to avoid running over a hen and her one-day-old chicks.

photo: A.J. Evans

***Asplenium trichomanes*, *A. scolopendrium*, *A. viride* & *Cystopteris fragilis* in a gryke on South House Pavement**

GROUP OF EUROPEAN PTERIDOLOGISTS (GEP) EXCURSION

Valsesia, Northern Italy – 22-28 July **Rolf Thiemann**

This year's meeting of the GEP was based in Varallo in Valsesia, a valley in the north of Italy near the border with Switzerland. It was the second visit of the GEP to this region, as, remembering the wonderful meeting there in 1998, there was a general wish to re-visit this area. It was organised by our good friends Mario Soster and Franco Passarello. We met on Sunday evening for dinner in our hotel and were informed by Mario and Franco of the programme for the next days.

On Monday we first visited a forested valley along a little creek near Serravalle Sesia in the lower part of the Sesia valley. Here, in a region with porphyric ground, we saw some of the more common *Dryopteris* species – *D. affinis* subsp. affinis, *D. cambrensis*, *D. borreri* – and also *Osmunda regalis*, *Asplenium septentrionale*, *Oreopteris limbosperma* and *Pteridium aquilinum*. The next stop was in the rice fields near Oldenico in the area of Vercelli. Here we looked for the endemic *Isoetes malinverniana* – without success. Perhaps the intensive use of herbicides by the rice farmers could be the reason for the retrogression of this very endangered species. We saw no other pteridophytes here but some interesting other plants such as the immigrant *Tradescantia virginiana.* After refreshment in a coffee-house, we visited on the way back a small rivulet ditch in a dark forest near Sostegno where we saw *Cyrtomium fortunei*, which is fully established here.

The next day we went to the region of the little village of Rassa in the mountains of the upper Valsesia. Great lenses of marble sometimes occur here in the silicate rocks (granites and gneisses). The combination of acid and alkaline rocks gives a very rich flora and we found *Dryopteris remota*, *D. filix-mas*, *D. dilatata*, *D. expansa*, *D. villarii*, *D. borreri* and

large numbers of *D. cambrensis*, *Gymnocarpium dryopteris*, *G. robertianum*, *Asplenium viride*, *A. trichomanes* subspp. *trichomanes* and *quadrivalens*, *A. septentrionale*, *A. ruta-muraria*, *Phegopteris connectilis*, *Cryptogramma crispa*, *Pteridium aquilinum*, *Oreopteris limbosperma*, *Athyrium filix-femina*, *A. distentifolium*, *Cystopteris fragilis*, *Polystichum lonchitis*, *P. aculeatum*, *Polypodium vulgare*, *Blechnum spicant* and *Equisetum fluviatile*.

On Wednesday morning we visited the south slope of Cima Lavaggio, a mountain seven kilometres west of Varallo between Vocca and Balmuccia consisting of Serpentinite rock. To negotiate the large steep boulders was torture in the hot and sultry sun but we were rewarded with large amounts of very magnificent *Notholaena marantae*. Some of the plants had rolled in their fronds to avoid drying out. Some *Asplenium cuneifolium* was also found. The next station was quite a contrast to the sunny boulders – we drove to the Val Sermenza and walked along the 'Sentiero Filix' ('Fern walk') in deep shady forest between the villages Boccioletto and Piaggiogna. It was a paradise for some *Dryopteris* species especially from the *D. affinis* complex. We saw very large plants of *D. affinis* subsp. *affinis*, *D. cambrensis*, *D. borreri* and *D.* × *complexa*.Some plants seemed to be *D.* × *convoluta* or *D.* × *critica*. Besides more common fern species we admired *Polystichum braunii*, *P.* × *wirtgenii* and *Dryopteris remota*.

Our goal on Thursday was the south side of Monte Rosa. From Alagna, the last village in the Val Sesia, we went by cable-car to the Passo dei Salati at 2,980 metres above sea level. Here we had a wonderful view to Punta Giordani (4,046 metres) and Vincentpiramide (4,215 metres), two peaks of Monte Rosa, the second highest mountain of the Alps. Here the group divided; some went from the top station by foot back to Alagna and the others, after some botanising at the top and around the middle station of the cable-car near Alpe Pianalunga in Val d'Olen, drove back to the village. Along the way were *Athyrium distentifolium*, *Matteuccia struthiopteris*, *Dryopteris expansa*, *D. cambrensis*, *Polystichum lonchitis*, *P. braunii*, *P. aculeatum*, *Cryptogramma crispa*, *Asplenium viride*, *A. adulterinum*, *A. septentrionale*, *Polypodium vulgare*, *Lycopodium clavatum*, *Huperzia selago* and others. *Woodsia alpina* had been previously reported from here but we did not see any.

On our last 'official' day we visited a district 12 kilometres north of Varallo near the small hamlet of San Gottardo. In the mountainous region to the east were *Lycopodium clavatum*, *L. annotinum*, *Diphasiastrum alpinum*, *D. oellgardii*, *Huperzia selago*, *Dryopteris cambrensis*, *D. expansa*, *Polystichum lonchitis*, *P. aculeatum*, *Cryptogramma crispa*, *Asplenium viride*, *A. cuneifolium*, *A. adulterinum* and *Botrychium lunaria*. Many other species have been recorded but were not seen as with the hot weather examination of the area had not been as intensive as usual.

Most participants went back home the next day but some spent a day visiting other places round Varallo, including the river Sesia with *Equisetum hyemale* and *E.* × *moorei*. We have to give great thanks to Mario Soster and Franco Passarello for all their hard work and diligent planning for such an excellent week in the Italian alps.

THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. You are welcome to visit the AFS website: amerfernsoc.org. Regular members receive *Fiddlehead Forum* five times a year, a newsletter published for those who are interested in growing ferns, hunting for them and expanding their knowledge of ferns. Journal members also receive the scientific quarterly *American Fern Journal*. Membership costs $22 and $40 per annum respectively for members residing outside USA, Canada or Mexico, including postage for airmail-assisted delivery. For particulars please write to Dr George Yatskievych, Missouri Botanical Garden, P.O. Box 299, St Louis, Missouri 63166-0299, USA (george.yatskievych@mobot.org). Online credit card payment is available via the AFS website: amerfernsoc.org.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. To take advantage of this, prospective members should contact Mr M.G. Taylor, Westlea, Kyleakin, Isle of Skye IV41 8PH (Membership@eBPS.org.uk).

HORTICULTURAL SHOWS & OTHER EVENTS

URBAN FERNS AROUND MANCHESTER MUSEUM – 28 July Dave Bishop

On the last Saturday in July, BPS Secretary Yvonne Golding gave a presentation on *Urban Ferns* to members of the public and three BPS members at Manchester Museum. Around 15 people attended. Yvonne first gave an introduction to the BPS from its formation in 1891 to the current day. Following on from this we saw an excellent video *The Secret Life of Ferns*, which explains the complicated fern life-cycle in a simple and understandable way. We then put this knowledge into practice when we were shown how to grow ferns from spores and we were able to examine a selection of living prothalli, which many people present had never seen before.

After tea we saw a slide-show of ferns in urban environments, including some exotic species living in a London basement (courtesy of John Edgington), native species living in Oxford drains (Nick Hards), York downpipes (Alison and Liz Evans), Sheffield cemeteries, the back streets of Scarborough, Manchester walls and Edinburgh men's toilets. After the show we went on a short walk around the Museum, finding ferns growing on walls, in drains and gutters, along downpipes and even on an old extractor fan. We soon found eight species: *Asplenium ruta-muraria*, *A. scolopendrium*, *A. trichomanes*, *Athyrium filix-femina*, *Dryopteris dilatata*, *D. filix-mas*, *Polypodium vulgare* and not forgetting *Equisetum arvense*. Yvonne and I then went to the pub as it was my birthday!

Having seen John Edgington's photo of forked spleenwort in London, I've been scouring the streets of Manchester in search of equally exciting ferns. So far, the most interesting finds have been two *Cyrtomium* specimens, growing in walls in the South Manchester suburb of Chorlton-cum-Hardy. These garden escapes are so stunted by habitat restriction that they have proved very difficult to identify to species level; this is often a problem with ferns in walls.

SOUTHPORT FLOWER SHOW – 16-19 August Michael Hayward

We again had a corner site for the BPS stand, allowing us to display ferns on two levels along the long side, and a selection of posters, Society goods and spore-growing display along the short side. Posters included a diagram of the life-cycle of the fern by Mike Hill and an expanded version of the new Society leaflet for children. The pleasing result of all this was the award of The Charles H. Curtis Trophy for the exhibit of greatest horticultural interest and/or educational value. This is only the second time in the history of Southport Flower Show that the trophy has been awarded to a specialist society, and my grateful thanks are due to the members of the BPS Education Subcommittee and to Mike Hill, whose combined efforts were largely responsible for this award. Although garden ferns had made more growth than usual during this exceptionally wet summer, when it came to selecting ferns for the display there were many damaged fronds to be removed, leaving the display a little thin. Nevertheless we still achieved a silver gilt medal for our display.

Visitor numbers were very disappointing and the numbers of entries in the competitive section were poor. The number of fern classes will be reduced next year but hopefully there will be more entrants from BPS members. Brian Russ won the BPS challenge trophy (unopposed) and Robert Crawford the Happilands trophy. Martin Rickard judged.

The winners of the competitive classes were:

Class 8 Individual Championship. Four hardy British Ferns (dissimilar), two Greenhouse Ferns (dissimilar) and two Foreign Ferns Hardy in Great Britain: 1st B. Russ (1 entry)

Class 9 One Foreign Fern Hardy in Great Britain: 1st R. Crawford, 2nd B. Russ, 3rd A. Smith (6 entries)

Class 10 One British Fern (any genus or variety): 1st R. Crawford, 2nd O. Fairclough, 3rd M. Hayward (7 entries)

Class 11 Three Hardy British Ferns (3 distinct species, not varieties): 2nd R. Crawford (one fern not as schedule) (1 entry)

Class 12 One Greenhouse Fern: 1st J. Abbott, 2nd P. Stewart, 3rd R. Crawford (4 entries)

Class 13 One *Asplenium scolopendrium*: 1st R. Crawford, 2nd A. Smith, 3rd B. Russ (3 entries)

Class 14 One *Polypodium*: 1st R. Crawford, 2nd M. Hayward (2 entries)

Class 15 Three *Polystichum* (3 distinct varieties): 1st R. Crawford (1 entry)

Class 16 Three *Athyrium* (3 distinct varieties): 1st R. Crawford (1 entry)

Class 17 Three *Asplenium* excluding *A. scolopendrium* (3 distinct varieties and/or species): (no entries)

photo: M. Hayward

Michael Hayward at BPS stand at Southport Show 2012, with The Curtis Cup

The pool of members serving on the BPS stand has been steadily increasing. This year my thanks are due to Ann Haskins, Steven Coleman, Robert Crawford, Alison Evans, Ann Gill, Alec Greening, Rita Hardman, Joan Hindle, Trevor and Ruth Piearce and Harvey Shepherd. We still need more volunteers and an enjoyable day is guaranteed whatever the weather! We aim to have four or more members on duty each day, with two manning the stand and the others exploring the show and it is a very sociable occasion. Sleep-overs can be arranged as necessary. The dates for next year's show are 15th to 18th August 2013.

GUIDED FERN WALKS AT NYMANS, WEST SUSSEX – 13-16 September

Alison Evans

The woods adjoining the garden at the National Trust property of Nymans at Handcross in Sussex are botanically rich, having an Atlantic flora, including *Dryopteris aemula* and *Hymenophyllum tunbrigense*. Following on from last year's successful series of guided walks, Jennifer Ide, Paul Ripley, Patrick Acock and Alison Evans again led fern walks in the Nymans woods. One of the walks was for Nymans woodland rangers, contributing to our aim of passing on field identification skills to members of staff at the properties, so that in future they may be able to resource walks 'in house'. Numbers of participants were small but the level of engagement and interest from members of the public made us feel that the time was well spent. This year we were able to use our new waterproof fern identification

guide, and fortunately we did not have the opportunity to prove how waterproof it is! Several people bought copies of the guide following the walks.

The woodland walk makes the most of the early opportunity for participants to discover four different ferns for themselves, male fern, lady fern, broad buckler fern, and hard fern. This is slightly complicated by the relative rarity of *Dryopteris filix-mas*, the dominant male fern being *D. borreri*, with a few magnificent specimens of *D. affinis*. After learning the common ferns, the challenge is then for participants to spot different ferns – the *Dryopteris aemula* near to the path was rather smaller than last year, but there is a fine specimen a little further on down to the left of the path, clearly different from the broad buckler fern. *Oreopteris limbosperma* grows in profusion by the path along the valley floor, and this year there was more *Dryopteris carthusiana* in evidence here. Bracken also makes a good talking point, as well as the different redwoods growing here. The circuit for the rest of the walk gives time for revision, but no new ferns.

An extension of the original walk, to see the *Osmunda regalis* and *Asplenium scolopendrium* by the lakes and *Polypodium interjectum* at the base of a lane-side tree, was added by request of participants on Saturday afternoon. There is also a stand of *Equisetum arvense* near the holiday cottage and a wild service tree a little further along the lane.

We did not do a formal evaluation of the walks this year, though we did have good verbal feedback from participants. We would be willing to repeat the walks next year, perhaps only at weekends.

FERNS AND FOSSILS AT THE YORKSHIRE MUSEUM, YORK – 29-30 September

Alison Evans

The Yorkshire Museum has a huge collection of fossils, mostly donated by members of the Yorkshire Philosophical Society, who founded the Museum. In addition, the Museum Gardens have a splendid fernery as well as several species of native ferns, so this seemed to be the ideal location for our 'Ferns and Fossils' event. Their curator of natural history, Isla Gladstone, and the assistant curator, Stuart Ogilvy, worked with us so that in our displays we were able to link living ferns with their fossil ancestors. Yvonne Golding, Neil Timm and Alison Evans provided plants for the displays and were on hand to talk to people about the displays. Thanks also to Bruce Brown, Roland Ennos, Chris and Lizzie Evans, Ann Robbins, Pam Simpson, Bryan and Gill Smith and Julia Wilkins for various help with setting up, manning the displays, leading the guided walks and packing up in a timely fashion on Sunday.

The main display of ferns and the guided walks around the fernery and gardens were free to members of the public. The activity room was inside the main Museum, so only available to those paying for Museum entry or having a York residents' card.

Ferns and Fossils display

This was in a room near to the Museum entrance, and included a range of ferns and lycophytes, where possible next to their fossil ancestor. Many different habitats and types of fern were represented, including a selection of British native ferns, together with interpretation sheets explaining their ecology and features. Where the fossils were too fragile to be displayed by the plant, a photo of the fossil specimen was used and the fossil itself displayed in the activity room display case.

Particular highlights in this room were *Trichomanes speciosum* in a beautifully illuminated fish tank, weird ferns such as *Psilotum nudum* and some ant ferns, the epiphytes *Drynaria* and *Platycerium* and the climbing fern *Lygodium*. Living specimens of *Marattia*, *Todea* and *Osmunda* were used to show the similarities with the fossils of *Marattia anglica*, *Todites williamsonii* and *Cladophlebis lobifolia*, all of which were collected from Jurassic deposits in North Yorkshire. Moving back in time to the Carboniferous, we had wonderful fossils of *Calamites* and *Lepidodendron* to display next to a living horsetail and a pressed specimen

of *Lycopodium clavatum* respectively. We also had a bowl of water with *Lycopodium* spores on top – we had mixed reactions when people put a finger in and found it did not get wet.

We displayed BPS posters and leaflets in this room. Joan Watson kindly gave her permission for us to reproduce her reconstruction of a Jurassic scene as a poster (this appeared in Joan's article in the 2010 *Pteridologist*), thus setting the scene for the ferns and dinosaurs theme that we used to encourage children to take part in our activities. Over 100 people visited the exhibition during the weekend. We had hoped for more as the Museum usually has many more visitors over a weekend, but it is likely that the flooding in York had caused people to stay away.

Activity room

Upstairs in the Museum we had a range of children's craft activities and a quiz. Children were also encouraged to look at fossils and ferns through microscopes and watch the 'dancing' *Equisetum* spores, which were a favourite with all ages. Other activities in this room included the Fern Life-cycle DVD, a spore-sowing demonstration, an identification quiz of six British native ferns, and information about fern horticulture, the identification and recording of ferns, and the BPS. We also had display cases of fossils, a selection of herbarium specimens, fern-decorated ceramics and some antique books on ferns.

Very few people found their way to this room, although we did have some very enthusiastic families who worked their way through all the activities – one Mum thought her boys might become 'Fernologists' as they were so interested!

Our big lesson for future events is that we need to be more proactive in publicising the event to local groups and schools. On the other hand, we had time to talk to people individually about the exhibits and so might have stimulated their interest in ferns.

RHS PLANT SOCIETY OPEN DAYS – 5 October

On 5th October the RHS opened their four main gardens to the public with free admission. Each garden invited affiliated societies to put on a display to help promote their particular area of interest. Amazingly, the BPS was able to have a presence at all four gardens: Harlow Carr in Yorkshire, Hyde Hall in Essex, Rosemoor in Devon and Wisley in Surrey. Here are reflections on the day.

HARLOW CARR

Alison Evans

The BPS was one of twelve plant societies putting on stands in the Jubilee Room in the Bramhall Learning Centre at Harlow Carr. Alison and Lizzie Evans supplied the plants and set up the stand. We were supported by Chris Evans over lunch-time and Bruce Brown in the afternoon and for take-down. The room was almost constantly busy from 10a.m. to just after 4p.m., and we rarely had a couple of minutes when we weren't talking to people. We were delighted at the number of people interested in growing ferns and asking us about their own garden situations. The first question asked by most people was how to pronounce 'Pteridological', and then what it meant. The ferns themselves obviously attracted people's attention. I was amazed and relieved at how well the *Athyrium filix-femina* 'Axminster' stood up to being fondled by almost everyone who came past. We sold some merchandise and recruited one new member, as well as giving out a large number of leaflets.

We felt that the day was extremely worthwhile, and would be keen to have a stand if the event is repeated next year. We felt that the content of our stand was just about right, although it would have been good to have more space to display plants. It was fortunate that we had our own poster-boards and plant stand, as the tables and board provided were too small for our display, and there was no room for the tree-fern to be displayed. The aisles between the stands were quite narrow, so we felt rather crowded all day, but at least there was never any intimidating empty space in front of the stand. There is the possibility of having stands in two rooms at Harlow Carr, and perhaps this should be considered by the RHS organisers next year.

HYDE HALL **Bryan Smith**

At Hyde Hall, six BPS members – Yvonne Golding, Tim Pyner, Michael Radley, Barrie Stevenson and Gill and Bryan Smith – met at 9a.m. in the Events Barn to set up the BPS display. We quickly filled our allocated two tables (each six feet by two feet), but managed to get another one to increase the overall size of our 'plot'. Our display was magnificent! Thanks to the wonderful potted ferns from Yvonne, Michael and Barrie, the fern bench had a real 'wow' factor, which immediately attracted visitors. If there had been an award for the best display in the barn, we would have won it easily! On our other benches, we had displays of fern propagation, merchandise items for sale, a selection of promotional material and a few spare ferns also for sale. On the walls behind us we put up some of our posters.

photo: Y. Golding

BPS stand at Hyde Hall, RHS Open Day

Tim Pyner, Yvonne Golding, Michael Radley, Gill & Bryan Smith, Barrie Stevenson

Visitors tended to come in waves, so it was fortunate that there were enough of us to answer the various questions that were thrown at us. Definitely a strong reason for not changing the Society's name is the number of times you get asked what 'pteridological' means and how to pronounce it – always a good opener. Although we didn't sign up any new members, several people were very keen and took away membership forms. The spore leaflets also proved popular and a number of visitors were tempted to 'have a go'. By about 3.30 the rain had set in and very few people were visiting the garden, so we packed up, pleased with our efforts and the good response we'd had.

ROSEMOOR **Nick Hards**

Matt Stribley, Eleanor and I enjoyed ourselves at Rosemoor and spoke to a lot of people. We did not sign up any new members though we sold quite a few postcards and a calendar, and gave out several membership forms. We all felt that our presence was a valuable shop window for the Society (apart from a lot of moans about our unpronounceable name!) We were situated next to the Chrysanthemum Society, in a marquee, where altogether seven societies were exhibiting. A large *Davallia* was the centrepiece of our stand and was much admired (and the rhizomes got stroked a few times!) We had a useful chat to Penny King, who is the Rosemoor fern specialist and who came in although it was her day off. With luck she and Matt will be arranging a *Polypodium* workshop. Penny also planned to post a blog on the RHS website about our visit.

photo: M. Stribley

Nick Hards on BPS stand at Rosemoor, RHS Open Day

WISLEY **Paul Ripley**

The BPS was one of about a dozen specialist societies invited to exhibit in a covered hall at the RHS Wisley headquarters. The RHS is dependent to some extent on the expertise of specialist plant societies, and although advertising and signing of the event could have been better, we were well received and helped by RHS staff. Six of us were present on the day and probably spoke individually to at least 60 to 70 visitors. Many of these were garden visitors, but some of the greatest interest was shown by members of the other exhibiting societies. Pat Acock, Julian Reed, Andrew Leonard, Jude Lawton, Roger Golding and John Edgington had generously provided an eclectic selection of very well grown ferns in pots, and Pat and Andrew provided a visually impressive poster backdrop. I thought the display was stunning, easily the best in the hall. Distribution of plantlets from a prolific *Asplenium* 'Maori Princess' was a bonus appreciated by many visitors. I hope we have a few new recruits to the Society as a result of the day, but personally I found it rewarding and enjoyable. With such fantastic help and support from our SE membership I hope the day can be repeated next year.

photo: A. Leonard

BPS stand at Wisley, RHS Open Day

Andrew Leonard, Paul Ripley, Roger Golding,
John Edgington, Jude Lawton, Pat Acock

FINAL COMMENTS **Yvonne Golding**

Thanks to all 20 BPS members up and down the country who were involved in this mammoth effort, which I'm sure raised the profile of ferns and our Society.

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* Bulletin.

ANNUAL GENERAL MEETING 2013 – The 110th AGM will take place on Saturday 6th April 2013 at The Royal Botanic Garden Edinburgh at 2p.m.

SUBSCRIPTIONS 2013 – Subscriptions were due on 1st January and should be paid to the Membership Secretary, Mike Taylor. Current rates are given inside the front cover of this issue. Cheques should be made payable to 'The British Pteridological Society'. Payment can also be made by **PayPal**, which is quick, cheap and easy to manage. Instructions are given on the renewal form. **Standing Order** forms are printed on the reverse of renewal forms and are also available from the Membership Secretary and the BPS website. Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December.

Members who do not amend their Standing Orders with their bank and pay at the old rate shall be notified that they will not receive the *Fern Gazette* until such time as their Standing Orders are updated. Members still paying even earlier rates shall be notified that their name will be removed from the Membership List until the Standing Order is updated or cancelled. Any monies received from old Standing Orders will be treated as a donation.

GIFT AID – Since 2003 the BPS has been a registered charity. This enables us to claim back from the Inland Revenue 20p for every pound paid in the annual subscription for each member who authorises us to do so. In 2012 we were able to claim for 179 members, which brought in almost £900. While this is obviously an extremely valuable addition to the Society's annual income, it could be considerably more if all eligible members authorised it. All that is required is a minimal amount of form filling and a second class stamp. **Even better, the form has only to be filled in once.** The small number of provisos is set out below:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

If the Inland Revenue allows us to claim relief on your membership subscription please authorise us to do so. It's the equivalent of a yearly donation to the Society of £5 for a full membership and £4.20 for an optional membership.

PUBLICATIONS BY AIRMAIL – Our journals can be sent by airmail to overseas members, provided that they advise the Membership Secretary and pay an additional subscription to cover airmail postage. See inside front cover for rates.

E-MAIL ADDRESSES – These are published in the Membership List "for members who have a relatively stable e-mail address and who keep up-to-date with their messages". A supplementary list and amendments are published in the *Bulletin*. To have your e-mail address added, changed or removed, please contact the Membership Secretary by e-mail.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. He is responsible for notifying any other officers and appointees who need to know.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending BPS field meetings should be aware of the Society's *Safety Code* (see this *Bulletin* p. 475), as well as the *Code of Conduct for the Conservation and Enjoyment of Wild Plants* (see p. 474), and are required to sign an annual Declaration form (circulated with the autumn mailing). Copies of these documents can also be obtained from the Meetings Secretary, Bryan Smith, or the BPS website.

PAYMENT OF EXPENSES – The Treasurer has *Rules for Seeking Reimbursement of Personal Travelling and Administrative Expenses* by Officers and Members acting on behalf of the Society. Forms for claiming these expenses can be obtained from the Treasurer.

COPYRIGHT – All contributors to the BPS journals and website are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Anyone wishing to apply for this funding should contact the General Secretary.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Anyone wishing to apply for this funding should contact the General Secretary.

THE J.W. DYCE AWARD – This award was set up in 2007 to honour the memory of Jimmy Dyce who was a member from 1935 until his death in 1996. The sixth J.W. Dyce award will be made at the AGM 2013 to the author(s) of the best paper, article, book or other substantial piece of work published during 2012 in any of the three BPS journals, on the BPS website or as a special publication. The award, which is a cash prize of £100, is open to everyone, whether professional or amateur pteridologist, horticulturalist or fern enthusiast.

MEMBERS' INFORMATION SERVICE – Members often require information and advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. Queries from members on the identification or cultivation of ferns should be sent to the Horticultural Information Adviser, Matt Busby.

BACK NUMBERS OF JOURNALS – Holdings of back numbers of our journals, although not complete, grow each year by 4 to 6 A4-sized boxes and shrink by about ten journals. This is a great pity as I have to have a cull every so often to fit them in my loft. The loft is now totally full so the Society will have to decide how many of each volume to keep to create space for future years, especially as we have a few more Special Publications in the pipeline. If people reading this and thinking they would like to have a few more of these valuable sources of fern knowledge were to download the list from the web or write to me immediately before they forget I think we could move a few more. As a special incentive this year I am willing to sell the first colour *Pteridologist* (Vol. 3) and index at £9 including postage. Try your best to empty my loft. *Pat Acock*.. BackNumbers@eBPS.org.uk

FOREIGN FERN SOCIETY JOURNALS HELD BY THE SOCIETY – The Society exchanges journals with a number of other fern societies in the world. We have a collection from societies in America, Australia, India and the Netherlands. If members would like to browse these, please contact Tim Pyner (t.pyner@btinternet.com) who holds the stock.

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals contact Tim Pyner (t.pyner@btinternet.com).

SPECIAL INTEREST GROUP: CULTIVARS – The Cultivar SIG welcomes anyone with a specialist interest in cultivars. They organise field trips, speakers and garden visits. For information contact Tim Brock (tim.brock108@gmail.com) or Julian Reed (julianreed@waitrose.com).

BPS WEBSITE – www.eBPS.org.uk (hosted by The Natural History Museum.) It is increasingly important for the Society's website to be a major means of communication. It provides information for the membership, but is also a 'shop window' to present the Society and pteridology to the wider world. Our aim is to make our website the premier source on the internet of information about pteridophytes and pteridology. In addition to the usual website enhancements, we continue to support our public bulletin board or 'forum' for the discussion of all aspects of ferns and other pteridophytes – **www.fernforum.net/bb**. If you have views on what the website should provide and/or could help with content, please contact the Website Editor, Anthony Pigott. Good digital photographs of members involved in fern-related activities are particularly welcome as are suggestions or contributions for wild sites, gardens and nurseries for *Where to See Ferns*.

E-BPS DIARY SYSTEM – On our website there is an eBPS Diary System, enabling us to see all the Society's events on one calendar. With meetings happening all over the country it is only too easy for events to overlap; we hope the diary system is helping to alleviate this and proving to be a useful planner for members. The system relies on regular updates so please send details of your BPS events to the Publicity Officer, Liz Evans.

FERNS IN MEMBERS' GARDENS – 'Ferns in Members' Gardens' is live on 'Pteridowiki' www.fernforum.net/mediawiki. Lists of ferns that members of the Society grow in their gardens are being compiled. In part, this is to build up a picture of which ferns grow in the different conditions around Britain. However, it is not limited to outdoor ferns, nor is it limited to Britain – contributions from members elsewhere in the world are welcome. When you contribute your list of ferns a general location (without detailed addresses) will be included together with contact details if you are happy for other members to see your garden. Browse around and see what you think. There are only a few contributions so far so to help build up a wider picture please contribute by contacting Roger Golding at rg@rogergolding.co.uk.

AMERICAN FERN SOCIETY – The AFS has had a reciprocal payment arrangement with the BPS for many years and this is available through their respective Membership Secretaries. See AFS advert on p. 443.

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS. This enables a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. Some RHS Journals are available free to members at indoor meetings. Further information is available from the Treasurer.

BRITISH WILDLIFE – Concessionary individual subscriptions to *British Wildlife* magazine are available to BPS members: www.britishwildlife.com. This excellent journal occasionally carries articles on ferns and reviews fern publications.

MERCHANDISE – Have you bought a BPS sweatshirt, polo shirt or fleece yet? These are all dark green with a small embroidered BPS logo in yellow. Other items, such as BPS ties, metal badges, ferny greetings cards, bookmarks, pens, calendars, mugs and jute bags are also for sale. A cheap, take-in-the-field fern guide is a new line. Can't find your order form? Contact the Merchandise Organisers or look on the website for details. The Organisers also welcome suggestions for new stock.

BOOKSALES – Finding second-hand fern books at reasonable prices is becoming more difficult to so if you are thinking of selling any of your books please consider first offering them to the Society. Frank Katzer would also be pleased to receive any donated or bequeathed books that could then be offered to members at affordable prices. Contact him by e-mail if possible.

PLANT EXCHANGE – This scheme enables UK and EU members to dispose of surplus ferns to the advantage of those who would like to acquire some different species and varieties. Most of the plants offered are young sporelings. A request form is enclosed with the *Bulletin* mailing inviting members to list ferns they wish to offer or indicate any they are seeking or merely to request a copy of the consolidated list when compiled. On receipt of the list, members contact one another using the details provided. Contact the Plant Exchange Organiser for further details.

SPORE EXCHANGE – The current spore list is published on our website or can be obtained from Brian and Sue Dockerill.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website free of charge in return for the inclusion of a note about the Society in their catalogues/ websites. The Website Editor can include an image if required. If members wish their nursery to be included, in the first instance please contact the General Secretary.

PUBLICITY & MARKETING – The on-line newsletter *Fern World* is now well established and keeps members up-to-date with BPS news. Please send the Publicity Officer any ferny news or anything you want publicised. She has also set up our own BPS blog on Posterous and we are on Facebook and Twitter. Please contribute by signing up. Contact Liz Evans.

EDUCATION – The Education Subcommittee would be very pleased to hear your ideas on how we can develop the educational role of the BPS. If you have information about any fern-related educational initiatives or resources that you have found useful please contact the Education Officer, Alison Evans.

FERN RECORDS – Members are reminded that records of ferns, horsetails, clubmosses and quillworts in the wild should be sent in the first instance to the BPS Recorder, Fred Rumsey, who will forward them to the Botanical Society of the British Isles (BSBI), or members may like to contact the appropriate vice-county recorders directly. Recorders' addresses are available from the BSBI website or BSBI yearbook, which goes to all BSBI members; for those without access to the Internet or yearbook please contact the BPS Recorder for details. The BPS recording card is available on our website or directly from Fred.

FORTHCOMING EVENTS, 2013:

RHS HAMPTON COURT FLOWER SHOW, 9th-14th July – We will be exhibiting at this prestigious show for the first time. If you would like to help in any way, please contact Yvonne Golding or Gill Smith.

SOUTHPORT FLOWER SHOW, 15th-18th August – Why not spend a few hours or a day helping to look after the Society's stand? You do not need to be an expert on ferns or fern growing, just prepared to spend a few hours or a day with us. Expenses are available, as well as free entry to the Show. If you grow ferns, why not consider entering your best specimens; Southport is one of the few shows with amateur classes for ferns. Details are available from Michael Hayward, 6 Far Moss Road, Blundellsands, Liverpool L23 8TQ; mhaywardL23@blueyonder.co.uk.

FERN COURSES 2013:

ROYAL BOTANIC GARDEN EDINBURGH, 8th June – Fascinating Ferns: a 1-day course. Tutor: Heather McHaffie. To book, contact RBGE education office 0131-248-2937 or e-mail education@rbge.org.uk.

FSC BLENCATHRA FIELD CENTRE, Lake District, 25th-30th August – The Fern Guide: a residential course. Tutor: James Merryweather. To book. contact FSC on 01768-779601 or e-mail enquiries.bl@field-studies-council.org.

FSC KINDROGAN FIELD CENTRE, Perthshire, 5th-8th July – Fern Identification: a residential course. Tutor: Heather McHaffie. To book, contact FSC on 01250-870150 or e-mail enquiries.kd@field-studies-council.org.

FSC PRESTON MONTFORD FIELD CENTRE, Shropshire, 3rd August – Field Guide to Fern Identification: a 1-day course. Tutor: Mark Duffell. To book, contact FSC on 0845-3307378 or e-mail enquiries.pm@field-studies-council.org.

FSC RHYD-Y-CREUAU – DRAPERS' FIELD CENTRE, Snowdonia, 16th-19th August – Fern Identification: a residential course. Tutor: Chris Metherell. To book, contact FSC on 01690-710494 or e-mail enquiries.rc@field-studies-council.org.

ACS DISTANCE LEARNING – Home study fern course: Ferns BHT 314 – To book contact ACS on 0800-3284723 or see www.acsedu.co.uk/courses/plant-varieties/ferns-bht314-161.aspx.

ANNUAL GENERAL MEETING 2012

MINUTES of the 109th Annual General Meeting of the British Pteridological Society held on Saturday 14th April 2012 at The Natural History Museum, London at 14.00 hrs.

IN THE CHAIR: The President, Prof. Mary Gibby.

PRESENT: Pat Acock, A.R. (Matt) Busby, Brian & Sue Dockerill, John Edgington, Alison Evans, Roger Golding, Yvonne Golding, Alec Greening, Nick Hards, Michael Hayward, Jennifer Ide, Stephen Jury, Trevor Lording, Frank McGavigan, Karen & Steve Munyard, Alison Paul, Trevor & Ruth Piearce, Tim Pyner, Michael Radley, Julian Reed, Martin Rickard, Bryan & Gill Smith, Barrie Stevenson, Sandy Strang, Matt Stribley, Richard Treganowan, Alastair Wardlaw, Sarah Whittingham.

Item 1 – APOLOGIES FOR ABSENCE: Graham Ackers, Ian Bennallick, Rob Cooke, Jonathan Crowe, Adrian Dyer, Liz Evans, Frank Katzer, Elise Knox-Thomas, Bridget Laue, Heather McHaffie, Alan Ogden, Fred Rumsey, Mike Taylor.

Item 2 – APPROVAL OF THE MINUTES: Minutes of the 108th Annual General Meeting of the British Pteridological Society held on Saturday 9th April 2011 and published in the *Bulletin* (Vol. 7, No. 4) were approved and signed by the Chairman.

Item 3 – MATTERS ARISING: There were none.

Item 4a – REPORT OF THE GENERAL SECRETARY: This report by Yvonne Golding was published in the *Bulletin* (Vol. 7, No. 4). There were no comments.

Item 4b – REPORT OF THE TREASURER: The Society's accounts for 2011 were published in the *Bulletin* (Vol. 7, No. 4). The Treasurer, Gill Smith, pointed out that funds in our current account had been decreasing due to low interest rates and consequently we have been eating into capital [see also Item 9]. She also drew attention to the questions in the *Bulletin* mailing document regarding e-mailing information to members; this considerably reduces the cost of mailings, so she made a plea for members to ensure that the Membership Secretary, Mike Taylor, always has their current e-mail address.

Item 5 – OFFICERS' REPORTS

The Officers' Reports were published in the *Bulletin* (Vol. 7, No. 4). There were no questions or comments.

Fern Gazette Editor. Mary Gibby reported that Bridget Laue and Adrian Dyer have taken on the role of reviews editors; they have already commissioned some review articles, the first of which would be published later in the year.

Item 6 – COMMITTEE APPOINTEES' REPORTS

The Committee Appointees' Reports were published in the *Bulletin* (Vol. 7, No. 4). There were no questions or comments.

Merchandise Organiser. Bryan Smith drew attention to the fact that postage has gone up considerably so it is well worth taking advantage of opportunities to buy merchandise, Special Publications and other books at meetings or to pre-order items to collect at meetings.

Item 7 – ELECTIONS

President-elect. It was explained that being President-elect for a year allows the future President to learn the ropes before their three-year term of office as President. Prof. John Edgington had been nominated by the committee and was elected unanimously (proposed by Nick Hards, seconded by Jennifer Ide).

Vice-Presidents. Patrick Acock had come to the end of his three-year term of office but was not standing for re-election. Jennifer Ide was also at the end of her three-year term but was available for re-election. Robert Sykes and Roger Golding had been nominated to stand

as Vice-Presidents. Election of these three was proposed by Frank McGavigan, seconded by Julian Reed, and they were all duly elected as Vice-Presidents for a three-year term. Our other Vice-Presidents are Matt Busby, Rob Cooke and Adrian Dyer.

Officers. All Officers were available for re-election, proposed by Roger Golding, seconded by Michael Hayward, and were duly re-elected en bloc. [General Secretary: Yvonne Golding, Committee Secretary: Graham Ackers, Treasurer: Gill Smith, Membership Secretary: Mike Taylor, Meetings Secretary: Bryan Smith, Conservation Officers: Heather McHaffie and Fred Rumsey, Project Officer: Anthony Pigott, Publications Secretary: Martin Rickard, *Fern Gazette* Editor: Mary Gibby, *Pteridologist* Editor: Alec Greening, *Bulletin* Editor: Alison Paul, Website Editor: Anthony Pigott; Education Officer: Alison Evans, Publicity and Marketing Officer: Liz Evans.]

Elected Committee Members. Having served their five-year term of office, John Edgington, Roger Golding, Howard Matthews and Matt Stribley retired at the AGM. Ian Benallick and Stephen Jury had been nominated for the committee. The other existing members – Bridget Laue, Frank McGavigan and Paul Ripley – were all available for re-election. These five were unanimously elected/re-elected en bloc having been proposed by Alec Greening and seconded by Martin Rickard. Nominations/volunteers were invited from the floor to fill any of the remaining five committee vacancies. Julian Reed volunteered and was proposed by Roger Golding, seconded by Yvonne Golding and unanimously elected.

Grateful thanks were given to Pat Acock, Matt Stribley and Howard Matthews for their various valuable contributions.

Committee Appointments. The only change was that Brian and Sue Dockerill were taking over the Spore Exchange. Gratitude was expressed to Matt Busby for all he has done in this role over the last three years, and Brian and Sue were thanked for taking on the job.

Item 8 – Appointment of Independent Examiners. Dr Nick Hards and Mr Alex Storie had agreed to continue in this capacity, and Gill Smith thanked Alex for examining the 2011 accounts.

Item 9 – Proposal to increase subscription rates for 2013. A document from the Treasurer, Gill Smith, outlining the need to increase subscription rates for 2013 and with proposed new rates was circulated with the *Bulletin*. Our rates have not gone up since 2002 but an increase is now unavoidable, due to rising costs of producing and mailing our journals combined with extremely low interest rates. The proposal was to increase all rates by 25% (see table below), which is in line with decisions by other similar societies.

	Current rate	New rate
Full Personal Members	£20	£25
Optional Members (not receiving *Fern Gazette*)	£16	£21
Student Members	£10	£12.50
Family Members	£2	£2.50
Subscribers	£33	£42

Jennifer Ide asked about airmail postage rates. These have been increased to £10 for all journals and £5 for those not receiving the *Fern Gazette*.

Surprise was expressed that subscriptions had not been increased sooner, and Matt Busby congratulated the Committee and in particular the Treasurer for keeping going for so long without having to do so. When asked if the increase was sufficient, Gill replied that hopefully there would be a financial upturn but regardless it is enough for now, especially if we keep up with airmail postage rates.

The new rates proposed by Gill were seconded by Julian Reed and were unanimously agreed.

Michael Hayward raised the issue of people joining at Southport Flower Show in August and having to pay again for the next year. It was pointed out that they could opt to pay just for the next year. Members are given the most recent Bulletin when they join. At some events there have been buy-one-get-one-free offers so that in effect people are getting the remainder of their first year free. Alternatively, at the RHS days in October we could offer 15 months for the price of 12, which sounds good and does not cost the Society anything. The Committee will discuss these issues.

Item 10 – Formation of a Shows Subcommittee. Yvonne Golding gave a short presentation on this topic. As a charity we are accountable for what we do and some of our activities must be for the public benefit, including the advancement of education, the advancement of the arts, culture, heritage or science and the advancement of environmental protection or improvement. We do a lot already, especially in terms of education, but we need to attract new members and continue to tell the public about ferns and encourage people to grow them. Shows are one of the best ways to do this. We have had a stand at Southport for many years and have had award-winning stands at other shows over the last few years. However, a lot of organisation is needed and we really need a Shows Subcommittee to enable us to keep up the impetus and enable us to do more, e.g. local shows. If anyone is interested in being involved with shows please contact Yvonne.

Yvonne also mentioned that giving talks at local gardening clubs was another good way of fulfilling our charitable aims. She has developed a PowerPoint presentation that complements our free leaflet *Ferns to Grow in your Garden* and is available for use by members.

Item 11 – J.W. Dyce Award. Martin Rickard announced that this had been won by Graham Ackers for his *Pteridologist* article 'The strange case of *Asplenium bulbiferum*', which was judged to be the best published contribution in 2011. Unfortunately, due to ill health Graham could not be present to receive his award.

Item 12 – ANY OTHER BUSINESS

Affiliation to the RHS and Plant Heritage (formerly NCCPG). Gill Smith drew attention to an RHS scheme that gives members of affiliated societies such as the BPS reduced joining rates for one year (£35.70 instead of £51 single or for two adults at the same address £51.10 instead of £73); in addition our Society will get £5 for each BPS member who joins the RHS at this reduced rate, plus new members will get a £5 RHS shop voucher. Existing RHS members cannot benefit from this. E-mail Gill for a copy of the information leaflet.

Tim Pyner asked about other benefits of affiliation. Currently the only other benefits are that we have free use of RHS garden facilities and we will have a presence at the four fairs for specialist societies at RHS gardens on 5th October.

Resources available. Nick Hards would be leading a health walk in Oxford to show people ferns and asked what resources were available. Alison Evans suggested the new BPS basic fern identification guide *What's that fern?* (printed on waterproof paper and available from Merchandise for £2) that was produced for National Trust walks. This focuses on woodland species and it was agreed that a version on wall ferns would be useful. Yvonne Golding said that she would need something similar for an 'Urban Naturalist' event in Manchester.

Mary Gibby closed the meeting at 15.35.

Alison Paul
***p.p.* Committee Secretary**

ACCOUNTS FOR THE YEAR ENDING 31 DECEMBER 2012

I have examined the accounting records maintained by the Treasurer of the British Pteridological Society. I certify that the Accounts are a true and fair view of the financial position of the Society.

Nick Hards, Independent Examiner, 6 March 2013

BPS ACCOUNTS FOR 2012

	2011	2012
ORDINARY ACCOUNT		
INCOME		
Subscriptions (*see note 1*)	£12,619.07	£14,104.72
Interest (*see note 11*)	£182.54	£199.21
Booksales (*see note 4*)	£3,124.18	£1,459.62
Merchandise (*see note 4*)	£689.55	£1,257.43
Inland Revenue Gift Aid	£896.16	£897.00
Publishers Licensing Society	£449.04	£414.49
Donations (included prize money in 2011)	£409.00	£448.00
Kindrogan field course	£1,980.00	n/a
Prize Money (*see note 12*)	£15.00	£250.00
TOTAL INCOME	**£20,364.54**	**£19,030.47**
EXPENDITURE		
Pteridologist	£5,587.30	£5,893.47
Fern Gazette (*see note 10*)	£2,801.90	£7,303.22
Bulletin	£6,195.08	£5,813.86
Printing & Stationery	£315.98	£1,117.00
Administration & Postage	£389.72	£750.93
Subscriptions to Societies (incl. Insurance 2011)	£126.00	£47.00
Plant & Spore Exchanges	£83.56	£72.36
Meetings (incl. Kindrogan field course 2011)	£2,209.00	n/a
Merchandise	£538.94	£383.05
Trustees' Expenses	£739.15	£868.20
Booksales	£2,016.06	£1,220.00
Special Awards	£100.00	£100.00
Autumn Mailing (*see note 13*)	£490.97	£2,753.55
Credit Card Charges (*see note 9*)	£307.72	£520.30
Computer Leasing (*see note 7*)	£462.37	£434.38
Promotion & Advertising (*see note 2*)	£224.99	£184.78
Other (Insurance fee in 2012)	£370.00	£55.00
TOTAL EXPENDITURE	**£22,958.74**	**£27,517.10**
Balance (income minus expenditure)	**–£2,594.20**	**-£8,486.63**
Brought Forward from previous year	**£31,801.49**	**£29,207.29**
Total in Ordinary Account	**£29,207.29**	**£20,720.66**
CENTENARY FUND (Restricted Account)		
Interest	£38.73	£46.29
Interest brought forward from previous year	£1,164.29	£1,203.02
Grant	£0.00	£0.00
Total Interest	**£1,203.02**	**£1,249.31**
Capital brought forward from previous year	£5,583.73	£5,583.73
Total in Centenary Fund	**£6,786.75**	**£6,833.04**

GREENFIELD FUND (Restricted Account)

Interest	£12.97	£15.50
Interest brought forward from previous year	£1,207.83	£1,220.80
Grant (*see note 6*)	£0.00	£115.12
Donation to Greenfield Fund (*see note 8*)	£0.00	£200.00
Total Interest	**£1,220.80**	**£1,321.18**
Capital brought forward from previous year	£1,051.00	£1,051.00
Total in Greenfield Fund	**£2,271.80**	**£2,372.18**

PUBLICATIONS ACCOUNT

Brought forward from previous year	£11,703.73	£12,380.77
Income	£637.36	£1,063.44
Interest	£67.18	£84.44
Expenditure	£27.50	£250.00
Total in Publications Account	**£12,380.77**	**£13,278.65**

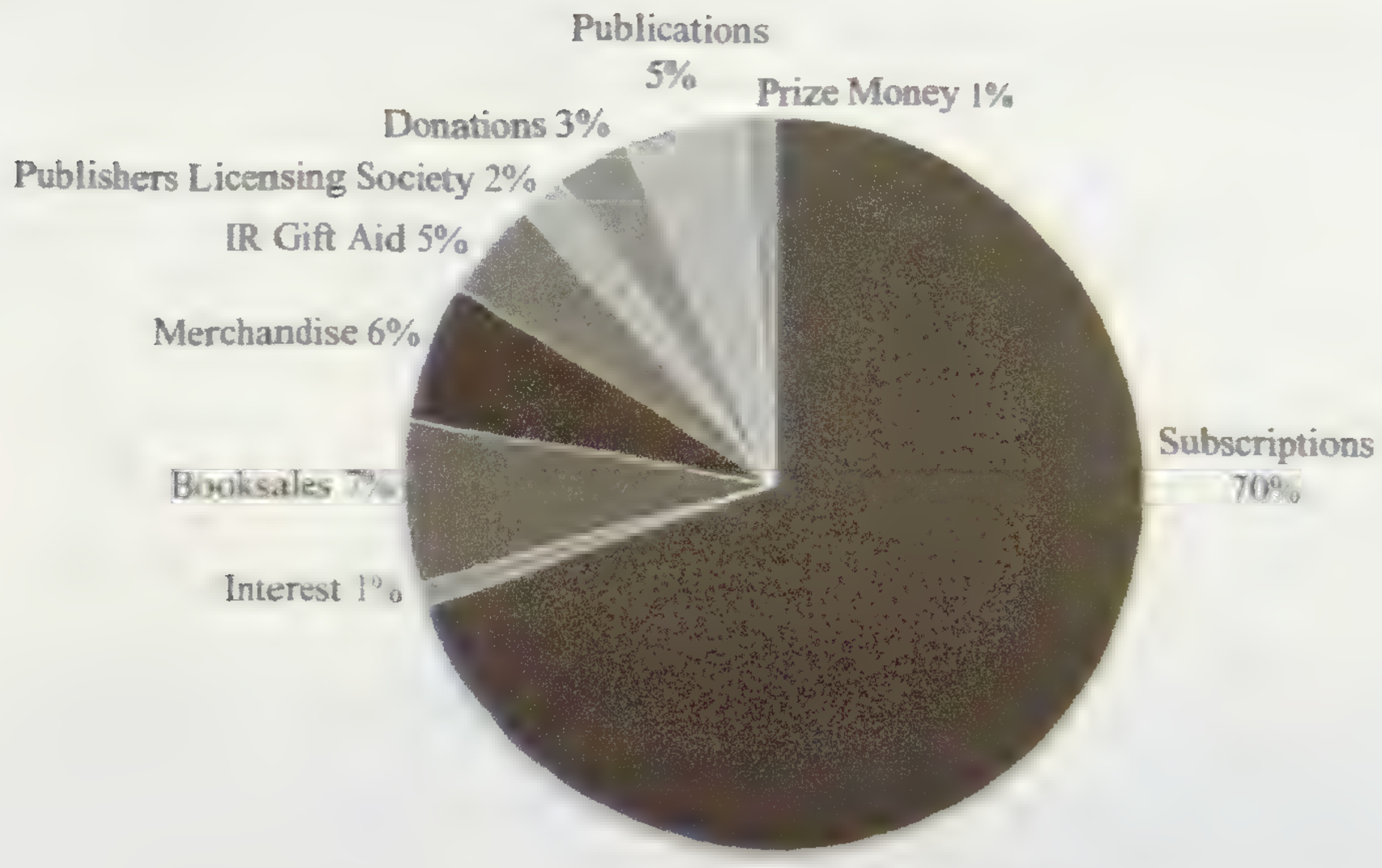
TOTAL FUNDS FOR YEAR ENDING 31 DECEMBER 2012

Ordinary Account	£29,207.29	£20,720.66
Centenary Fund	£6,786.75	£6,833.04
Greenfield Fund	£2,271.80	£2,372.18
Publications Account	£12,380.77	£13,278.65
Total Funds	**£50,646.61**	**£43,204.53**

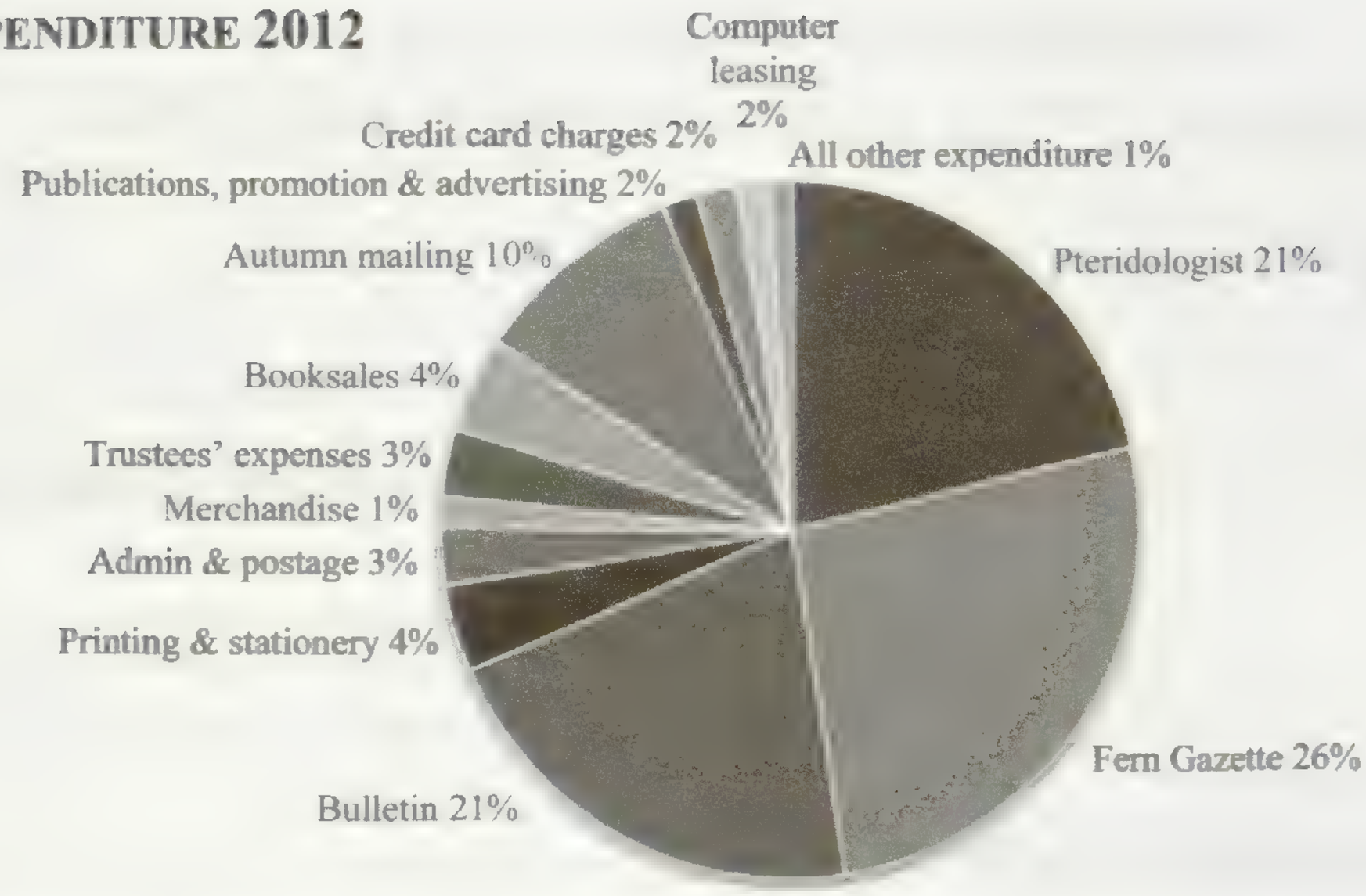
REPRESENTED BY

Charitable Organisations Investment Fund (COIF)	£39,222.65	£39,568.09
Bank of Scotland & Others	£11,423.96	£3,636.44
Total Funds	**£50,646.61**	**£43,204.53**

INCOME 2012



EXPENDITURE 2012



NOTES TO THE ACCOUNTS

1. The accounts reflect the subscriptions actually received in the year.
2. The Society has not paid an agency for advertising but has been promoting and advertising the Society where possible via RHS, BBC, county and national shows and public display days. Details of these appear in the *Bulletin*.
3. The Society possesses the following stock: FSC Key to Common Ferns - 80 valued at £160.
   What's that Fern? booklet – 350 valued at £700
   Back issues of the *Bulletin*, *Fern Gazette* and *Pteridologist* valued at approximately £2,000.
   Merchandising valued at approximately £2,500 & capital of £1,903.44.
   Booksales – new and second-hand books valued at approximately £4,800 & capital of £2,420.57.
   BPS Special Publications (no. copies): no.3. Cultivation and Propagation (203) £1,015;
   no.4. History of British Pteridology (635) £2,540; no.5. BPS Abstracts & Papers (331) £1,324;
   no.6. CD Rom – BPS Minute Book (19) £190; no.8. New Atlas of Ferns (32) £320;
   no.9. Fern Books Before 1900 (328) £4,920; no.10. Occasional Paper of the BPS (9) £22.50.
   The Society received a bequest of fern books from R. Graham Ackers – these books have still to be individually valued so no stock value has been attributed to them for the purpose of these accounts.
4. Full details of Merchandise and Booksales Accounts can be obtained from the Managers.
5. Only the 'Interest' section of the Restricted Funds is available for payment as grants.
6. A Grant of £115.12 was paid to install an automatic watering system for the fern house at Manchester University – an article about this will be published in the 2013 *Pteridologist*.
7. Computers for specific BPS officers' use are being leased from Dell Computers. Dell has now refused to lease any further machines to small Societies so purchase may be the only way for these to be replaced.
8. An anonymous donation of £200 was given to enhance the Greenfield Fund.
9. An exorbitant termination fee (Contractual) had to be paid to the Bank of Scotland Merchant Services to end the Credit Card provision.
10. Three issues of *The Fern Gazette* were produced in 2012: the two 2011 issues plus one for 2012. The outstanding 2012 *Fern Gazette* will be produced as an extra in 2013. The team set up to commission review papers for the *Gazette* has seen publication of the first review.
11. Interest rates have still been very low but the Society has not had to withdraw any funds from the deposit account. The COIF account interest rate started the year at 0.841%, rose slightly above this during the year but finished the year on 0.816%; £345.44 interest was earned in 2012. This was the third year with little interest added to the funds so it was agreed at the 2012 AGM to increase Subscriptions from January 2013.
12. £250 prize money was won for a Silver Gilt medal and the Charles Curtis Award at the Southport Show 2012.

Gillian Smith, Treasurer

REPORTS OF OFFICERS & COMMITTEE APPOINTEES FOR 2012

GENERAL SECRETARY – Yvonne Golding

In 2012 the BPS committee first met in January at Manchester Museum. The 109th Annual General Meeting was held in April at The Natural History Museum, London. Changes in our Committee included the appointment of our President-elect John Edgington, two new Vice-presidents: Robert Sykes and Roger Golding, plus three new trustees: Ian Bennallick, Julian Reed and Stephen Jury. In addition we welcomed Brian and Sue Dockerill as our new Spore Exchange Organisers. The new committee met for the first time in May at RHS Harlow Carr, Harrogate, and in October we were back at The Natural History Museum in London. As you can see, your BPS Committee continues to travel around the country in order to run your Society.

At our AGM in London we awarded the fifth J.W. Dyce award to Graham Ackers for his article on *Asplenium bulbiferum*, which was published in the *Pteridologist*. The award (of £100) is open to anyone who writes an interesting and informative article for any of our publications. Graham was too ill to attend the AGM to receive his award in person though expressed delight at receiving it. He sadly died a month later. Many BPS members attended Graham's green burial in a peaceful woodland site in Surrey. I worked with him very closely and miss him very much, as do all the members of our Committee. Graham generously left his fern book collection to the BPS, which we will be offering for sale to members. This gives you the opportunity to obtain one of Graham's books and help raise funds for our Society. Graham's obituary is published in this issue of the *Bulletin*. Sadly, I need to mention other members that died in 2012: Barbara-Joe Hoshizaki of the US whom many of you will know as the author of *The Fern Grower's Manual*; David Davies; Terry Peterson; Linda Pickering; Ivor Price; Sue Sykes and Marie Winder. We send our condolences to all their families.

This past year I have been 'Flying the Flag for Ferns' in Manchester both at the museum and at the University Botanical Grounds better known as The Firs. I have donated ferns to expand the greenhouse collections at Henbury Hall in Cheshire and at Chatsworth House in Derbyshire. In the autumn the Manchester Group planted around 100 ferns (all donated by BPS members) at Jodrell Bank, where over the next few years we plan to expand the fernery and make a self-guided fern trail for visitors. Are you flying the flag? If you give talks about ferns then please let us know. Alternatively if you would like to give talks but do not know where to start then please ask for a loan copy of our PowerPoint presentation. Another way in which you can help to raise our profile is by taking a stand at your local flower show. This needn't be elaborate, just a few choice ferns on display with some BPS literature. We can advise about this. The important thing is to chat to people about ferns and encourage them to grow them and of course join our Society!

One of the ways of raising the profile of the BPS is to link up with other larger organisations. Currently we are working on our collaboration with the National Trust to organise fern walks at their properties. This is supported by the fern guide developed by the Education Subcommittee, which describes the most commonly found ferns. We hope that Regional Organisers can link up with NT wardens and organise fern walks in their local area. We are also working with the RHS. In October 2012 twenty BPS members represented our Society at open days held at all four RHS gardens: Rosemoor in Devon, Harlow Carr in Yorkshire, Hyde Hall in Essex and Wisley in Surrey. In July 2013 the BPS will be participating for the first time at the prestigious RHS Flower Show at Hampton

Court. If you are going to the show then please come and see us. Alternatively if you would like to join our help rota then do get in touch.

In addition the BPS worked in 2012 to raise the profile of the Society by attending events at three nationally important museums: in May we were at The Natural History Museum in London for a 'Big Nature Day', in June the Yorkshire Museum in York for a BioBlitz, in July Manchester Museum with 'Urban ferns' and in September the Education Subcommittee returned to the Yorkshire Museum with our BPS road-show 'Ferns and Fossils'. If you know of a venue in your area for this event then please get in touch.

Once again congratulations are due to Michael Hayward who triumphed at Southport Flower Show in August when the BPS stand was awarded the coveted Charles H. Curtis Trophy, together with a Silver-gilt medal.

On another horticultural note, a small grant from our Greenfield Fund was made to the volunteers at The Firs to buy an automatic watering system to help irrigate the Moss House, which perhaps more correctly should be renamed 'The Filmy Fern House'. You will be able to read about this in the next edition of *Pteridologist*.

In 2012 I visited Austria and Germany with the BPS and enjoyed the wonderful alpine flowers and ferns as well as the good company of BPS friends. I had the pleasure of leading our Manchester Group to some exciting local locations where we continue to find new sites and monitor historic ones. And in November I attended the excellent research day at NHM organised by Fred Rumsey and Alison Paul. I also enjoyed reading the first of a series of what I think are going to be excellent review articles in the *Fern Gazette*, and I continue to enjoy our excellent publication *Pteridologist*, edited by Alec Greening. I'm sure this goes a long way to attracting new members, as people see it at the shows and other events that the BPS is running up and down the country for the general public. As a charity this is exactly what we should be doing!

Happy Ferning in 2013!

MEMBERSHIP SECRETARY – Mike Taylor

Although 48 new members were recruited for 2012, the number of members decreased overall by 17 to 628. This is made up of 426 Full (of which 47 are family members), 90 Optional (of which 4 are family members), 31 Complimentary, 8 Honorary and 7 Student members and 67 Subscribers. The number of Subscribers is unchanged. About 70 members took advantage of the facility to pay via the AFS. At the time of writing we already have 18 new members for 2013, though quite a number of existing members have indicated that they will not be renewing for 2013.

The Society aims to publish four journals a year, the *Bulletin*, the *Pteridologist* and two issues of the *Fern Gazette*. If you think you are missing a journal please contact me as they do go missing for various reasons.

MEETINGS SECRETARY – Bryan Smith

The Meetings Subcommittee held a planning meeting in February but, as is the usual case, most of our business was conducted by e-mail. Apart from overseeing and helping with the year's programme, we also finalised the Guidelines for the Organisation of BPS Meetings, which is now on the website.

During 2012 we had another successful meetings programme, with a June weekend visit to Wiltshire (organised by Nick Hards) and a September long weekend visit to Northumberland (organised by Rob Cooke). One-day meetings included the April AGM at the NHM (organised by Pat Acock), the Autumn indoor meeting also at the NHM about de-mystifying current fern research (organised by Fred Rumsey), and an annual event, the BPS

stand at the August Southport Flower Show (organised by Michael Hayward). Overseas meetings included two February weeks in South Africa (organised by Jennifer Ide) and two July weeks in Germany and Austria (organised by Rolf Thiemann). Reports on all of these meetings can be found in the rest of the *Bulletin*.

Details of meetings planned for 2013 were circulated with the Autumn mailing and include visits to the Western Isles (June), Lincolnshire (July) and Cornwall (September), as well as an AGM weekend in Edinburgh (April) and the Autumn indoor meeting at Harlow Carr (November). As before, BPS will be at the Southport Flower Show (August), but for the first time we will also be at the RHS's prestigious Hampton Court Flower Show (July).

As always, the success of these meetings is dependent on members who voluntarily give up their time and effort in the organisation. This is no mean feat, but the rewards are well worth it. If you fancy organising such a meeting, please do let one of the committee know. You won't be going it alone, as we always allocate a subcommittee member as a liaison point for each meeting. Even if you don't fancy leading, please do let us know if there are any places you would like to visit and study ferns.

Finally, I would endorse the fine work that Regional Meetings Organisers do in arranging trips 'on your doorstep'. Even if you are just visiting an area on holiday, it is worth checking the on-line calendar or contacting the Regional Organiser to see if there's a meeting you can join.

CONSERVATION OFFICER - Fred Rumsey

Work continues to assess the conservation status of our native fern species, many actions now being devolved necessitating reviews at the country level. Several recently recognised critical taxa such as *Lycopodium lagopus* and *Dryopteris pseudodisjuncta* are still considered Data Deficient but sterling work by Roger Golding and others has helped provide more detailed recent records from which a more informed assessment can start to be made. In both cases questions surround their distinctness, relationships and people's ability to generally recognise them – publication of better guidance, such as that prepared by the late Ken Trewren will hopefully help, as will molecular work currently being undertaken at the NHM.

Of the species of most conservation concern nationally it is encouraging to report good levels of survival for transplanted plants of *Woodsia ilvensis* at several sites – the real test of the success of this work will be evidence of natural regeneration, which, as yet, we don't have.

On a sadder note, Mark Jannink reported the loss of the only known extant *Asplenium* × *jacksonii* from the Guernsey lane-bank where my wife Sue first found it in 2008, probably the victim of the annual vegetation cutting which, however, also does so much to stimulate the production of these hybrids. Its loss was partially alleviated by the discovery very close by of a new *A.* × ***microdon***!

I was also interested to see that Plantlife in their report 'Our Vanishing Flora', published in December, have included *Dryopteris cristata* in their 'Unlucky 13' – the next likely candidates for national extinction. It is over ten years since we last did a complete national survey of this plant, although I know that the East Anglia group have been doing work on this, supporting the view that it has continued to decline. I hope this work can be built on this coming year, in collaboration with Tim Pankhurst at Plantlife, to try to secure the future of this species.

RECORDING OFFICER - Fred Rumsey

The year saw that rarity, the addition of a probably native species to the British list. Herbarium studies revealed the past presence of *Diphasiastrum tristachyum*, previously overlooked as *D.* × *issleri*; sadly it hasn't been seen at its Hampshire locality for over 140 years and is unlikely to be refound in the British Isles. Reconsideration of herbarium specimens by Marcus Lubienski has also led to the recognition of another (?second) English

site for *Equisetum* × *trachyodon*, very welcome following the earlier redetermination of plants referred to this from the Cheshire coast as *E.* × *meridionale*. The year closed with news from Christopher Fraser-Jenkins, who believes that amongst his old herbarium material currently being worked through in Edinburgh, are collections of *Cystopteris diaphana* from Skye. If so, this would constitute a considerable extension of range and possibly first natural occurrence in Scotland. Elsewhere in Scotland, Claudia Ferguson-Smyth discovered the very rare but potentially overlooked hybrid *Isoetes* × *hickeyii*, again new to the country.

Once again I'm delighted to have the opportunity to thank all those who have sent me or their local vice-county recorders and record centres their records, and to try to encourage those who never have that you can get involved! Your records really are a valuable resource. While adding a species to the UK list is perhaps unlikely for most of us and even new vice-county records are hard to get, general recording is still vital. There is something very satisfying about adding dots to the map and you can now very easily see the current maps displayed online at www.bsbimaps.org.uk to see what's been recorded and where. The six different recording periods (<1930, 1930-69, 1970-86, 1987-99, 2000-9, 2010-) are given different bright colours, the dots looking like Smarties and so within the recording community there is now talk about getting Smarties whenever a new hectad record is made, or updated causing the colour to change. I should offer a prize for the BPS member who gets the most Smarties to encourage our recording activity! Happy hunting to all in 2013.

PUBLICATIONS SECRETARY – Martin Rickard

The *Pteridologist* and *Bulletin* continue to be produced to a very high standard. Both editors, Alec Greening and Alison Paul respectively, are to be congratulated on the quality of the issued journal. The *Fern Gazette* is also in rude health. Mary Gibby, the editor, has recently appointed an Editorial Board of seven or eight specialists based in the Americas, Africa, Asia and Australasia as well as Europe. This should ensure a continual stream of high quality material, in various disciplines, for the foreseeable future.

There have been no new publications issued this year. Two potential publications referred to last year are nearing completion. These are John Edgington's account of first records of British ferns and lycophytes, and Michael Hayward's study of the Jones nature prints. Having seen both drafts I am sure both will be very well received within the Society and the botanical world in general.

***FERN GAZETTE* EDITOR – Mary Gibby**

The *Fern Gazette* is getting back on track with three parts published during the year. It was good to be able to dedicate one of these to Clive Jermy on his 80th birthday; Clive did so much for the BPS – enthusing members new and old, organising meetings and conferences, being a great President and establishing the *Fern Gazette* as a significant scientific publication. I am striving to make it this again, and am grateful to help from others. First I must mention Adrian Dyer and Bridget Laue who have voluntarily taken on the task of acting as commissioning editors for a series of review papers for the *Gazette*, the first of which was published in Volume 19 Part 3. I hope you have enjoyed reading this. Second, I have been in touch with a range of fern researchers from across the globe, and invited them to join the *Fern Gazette* Editorial Board. I am delighted to say that every one of them immediately responded positively to the invitation and I look forward to working with them in the future to increase the number and diversity of papers in the *Gazette*.

***PTERIDOLOGIST* EDITOR – Alec Greening**

The 2012 *Pteridologist* ran to 84 pages, plus cover, and was the largest issue to date. Many members commented on the quality of the images and I am glad that this problem area has been resolved. The range of articles was a direct result of many new members submitting

articles and I hope that this trend will continue. The appeal for proof-readers was very fruitful and I am enjoying working with them.

The biggest problem was the late issue of the magazine. With the extra help and a strict schedule on my part, I am confident that the 2013 *Pteridologist* will be published in May.

This next issue will be the final part of Volume 5. Time has flown since Martin Rickard and I agreed to take on the *Pteridologist* whilst ferning in Derbyshire six years ago and I am already looking forward to starting Volume 6. If you would like to submit articles for consideration please contact me.

BULLETIN EDITOR – Alison Paul

The 2012 *Bulletin* is another bumper issue with 100 pages, a reflection of the impressive number and range of the Society's meetings and other activities.

WEBSITE EDITOR – Anthony Pigott

The website continues to develop, both with the usual updates of BPS information and new features. There have been a series of technical problems with the Society's web host, which seriously hindered update of the website for part of the year. These have apparently been overcome but we are taking steps to ensure that the BPS website has greater flexibility and resilience in the future.

We continue to work with a system of 'content providers' to enable more people to be involved in the acquisition and update of material for the website.

The BPS Fern Forum (www.fernforum.net/bb/) now has over 200 registered members. The Forum enables experts and enthusiasts from all over the world to exchange information about all aspects of pteridophytes. We see this as a significant service provided by the Society and one that enhances its visibility and standing. In addition, we have continued to implement features such as an expanded and revamped 'Where to see Ferns', 'Ferns in Members' Gardens' and a 'Hardy Ferns Guide' using wiki software that allows easy editing by several people. We expect more of this to 'go live' in the coming year.

We continue to expand the use of e-mail and 'social networking' to enhance the way the Society communicates with its members. These are covered in more detail in the Publicity Officer's report.

As always, offers of contributions and other help are extremely welcome. A list of ways that people can help, large and small, is on the website.

EDUCATION OFFICER – Alison Evans

The Education Group has had another busy year, with several events and publication of educational leaflets. Our Subcommittee meeting in March 2012 focused on planning for these, and was also used to prioritise our future activities.

The early part of the year saw the production of the professionally printed leaflets 'Ferns for different garden conditions', and the more ambitious waterproof fern identification guide, 'What's that fern'. We are also very fortunate in that Michael Hill has produced a drawing of the fern life-cycle to our specifications for use by the BPS. We have incorporated this into a very popular leaflet 'The Private Life of Ferns'. This has been a great asset when explaining about ferns to members of the public at our events. We have also launched a poster for children – 'Pterry the Fern's Top 5 Facts about Ferns', which seems to be popular with all ages.

In May, Manchester University held an open day. Around 40 interested members of the public were bussed down to The Firs where Yvonne Golding was on duty to show people the excellent fern collection in the Greenhouse and Moss House and to tell them about the complexities of the fern life-cycle. This was supported by our educational leaflets and posters.

Our next event was the OPAL-funded 'Big Nature Day' at the Natural History Museum on 27th May. A wide range of natural history societies was present, so it was a good opportunity for networking as well as engaging with the public. Pat Acock, Alison Evans, Roger Golding and Tim Pyner manned the stand, with help from Fred Rumsey when he was free from his NHM duties. We had an impressive collection of British native ferns, mostly provided by Roger, so that we could demonstrate the ferns in the ID guide. The stand attracted a lot of attention, and several children completed our quiz, the winner living in Switzerland! It was a gloriously sunny day, so we had to reverse our plans and put the poster stands out on the grass to make way for our ferns in the shade.

On 16th of June we had a BPS stand at a BioBlitz in the grounds of the Yorkshire Museum, in central York. In contrast to the previous event we had to cope with heavy rain and high winds, but again the stand attracted many visitors, and several people undertook the guided walks to see the wild ferns in the grounds, and the well-stocked fernery. Here we proved that our fern identification guide is completely waterproof, and we sold several copies. We were also able to supply the local records centre with the fern records for the Museum grounds.

In July, Yvonne Golding gave a presentation to members of the public on 'Urban ferns' at Manchester Museum, part of an ongoing programme of lectures called 'The Urban Naturalist'. This was followed by a short walk around the Museum site, where eight species were identified.

Our educational resources were further developed by Michael Hayward, who produced a large poster of our life-cycle diagram, with text from the 'Private Life' leaflet and encouragement to grow ferns from spores. He also produced a larger poster of 'Pterry the Fern's Top 5 Facts about Ferns'. These were used at Southport Flower Show, 16th to 19th August, where the stand was awarded the Charles H. Curtis Trophy for 'the exhibit of greatest horticultural interest and/or educational value in the show', in addition to a Silver-gilt medal.

September 13th to 16th saw a repeat of the woodland fern identification walks at the National Trust property, Nymans, in Sussex. Pat Acock, Alison Evans, Jennifer Ide and Paul Ripley led walks for the public and for the rangers at Nymans. The event is described in a separate report.

Throughout the year, members of the Education group have been visiting sites to assess their potential and plan for future events. The Longshaw Estate National Trust property was included in the Manchester and North Midlands group visit to the nearby Padley Gorge. The possibility of holding a classroom fern identification session here followed by a field excursion has been suggested for 2013. There was also a visit to Mrs Darwin's greenhouse in Cambridge, a possible site for an event in 2013 relating to Victorian ferneries. There were three visits to the Yorkshire Museum to prepare for the BioBlitz and for the Ferns and Fossils event in September, which is reported separately.

The Education group were also pleased to support the local members who put on stands at the four RHS gardens on the Plant Societies' Open Day on 5th October, also reported in this *Bulletin*.

Finally, in November the Manchester Group began planting a fernery with BPS-donated plants at Jodrell Bank Arboretum. This is an ongoing project with the aim of making a fern trail supported by our 'What's that Fern?' booklet, which will be on sale at the Jodrell Bank Visitor Centre.

One task for the Education group in the coming months is to decide how best to use our limited resources to provide information for the public. We would welcome your comments and suggestions about how we can be most effective – please e-mail Education@eBPS.org.uk with your ideas.

PUBLICITY & MARKETING OFFICER – Lizzie Evans

In my role as Publicity and Marketing Officer this year I have continued to produce the on-line *Fern World* Newsletter and maintain the BPS presence on Facebook, Twitter and Posterous. For the Education Group I designed and produced the 'Pterry the Fern' poster aimed at children, as well as a limited hand-printed run of new members' packs for display and distribution at shows and events. I also collaborated with Gill Smith in redrafting the lapsed member reminder letters, and I took on the role of keeping the on-line meetings diary up-to-date. I have also been testing a mass e-mailing system, which is intended to reach the entire membership quickly with important updates. As always, if you would like any more information about any of the Publicity channels, or wish to submit a news item, please e-mail Liz Evans at Publicity@eBPS.org.uk. Thanks.

PROJECT OFFICER – Anthony Pigott

Recording & Mapping. This is aimed at increasing the participation of the BPS in the recording and analysis of pteridophyte distribution in Britain and Ireland. We encourage members to make records, and recording cards are available to download from the website, or contact Fred Rumsey. We are working with the BSBI to facilitate the input of new data and access to existing records.

Photographic Recording. We invite people to take photographs of fern sites at different points in time with a view to learning about variations in conditions and abundance. Full details are on the website. Members are strongly encouraged to participate.

On-line Journals. A few years ago the BPS decided to make back numbers of its journals available on-line. There is a tremendous wealth of pteridophyte knowledge in those pages that is difficult to access and search on paper. Most of the Society's journals over two years old have now been scanned and are available at the Biodiversity Heritage Library (BHL). Go to: www.biodiversitylibrary.org/ and search for 'British Pteridological Society'. We also hope to have them on our website in the next year.

Website Development. This project continues to look at ways to get more people involved and to make our web activities easier to expand and develop. For more details, please see the Website Editor's report.

SPORE EXCHANGE ORGANISER – Matt Busby

I am pleased to report that all 107 requests were completed and sent out before the 1st April 2012. Each year I look forward to adding new species to the list and I was pleased to see some seven new items added to the 2012 list. Each year any three-year-old spores are deleted from the list and I was pleased to take them to the 2012 AGM for free distribution to members.

In June I handed over responsibility for the Spore Exchange to Brian and Sue Dockerill. I was very reassured knowing that the scheme would be taken over by Brian and Sue who are obviously very keen; it bodes well for the future of this important part of our Society's activities. Their address is 19 Westfield Road, Glyncoch, Pontypridd, Mid Glamorgan, CF37 3AG, UK.

Brian and Sue will be pleased to receive donations of spores for the Spore Exchange at any time. There is no need to clean the spores, just place fertile fronds in envelopes with notation naming the species and the donor's name. It is a good idea to check through the 2012 list and see if you have items in your collections that are missing from the list. Please e-mail any queries to Spores@eBPS.org.uk.

I thank all the 2011 donors for their support and for the advice received from various Committee members.

PLANT EXCHANGE ORGANISER – Jonathan Crowe

Donor forms were distributed with the spring 2012 mailing. The Plant Exchange List was compiled and first distributed early in July 2012.

Statistics for taxa offered are shown below:

Status Code	Plant Status Description	No. in 2008	No. in 2009	No. in 2010	No. in 2011	No. in 2012
Sp0	Sporeling less than 1 year old	6	13	0	3	0
Sp1	Sporeling 1-2 years old	17	18	17	15	18
Sp2	Sporeling 2-3 years old	19	16	19	18	9
Esp	Established plant	20	30	42	12	18
Bul	Bulbil	6	5	4	3	1
Rhs	Rhizomes	1	4	6	3	0
	Plant status not stated by donor	0	0	0	0	0
	Totals	**69**	**86**	**88**	**54**	**46**

The statistics for participants are shown below:

Category of Participant	2008	2009	2010	2011	2012
Donors only (thus only offering plants)	4	6	6	6	5
Donors also having 'wants'	3	2	3	1	2
'Wanters' only (thus not offering plants)	-	-	2	1	1
List requesters only (neither offering plants nor having 'wants')	3	17	15	5	11
Total number of participants	**10**	**25**	**26**	**13**	**19**

By comparison with last year, participation in the scheme has increased by 46 per cent but the number of taxa offered has decreased by 15 per cent.

Although I organise the Plant Exchange I generally have no knowledge of the extent to which the scheme is used (except in respect of the plants that I myself have offered). So this year I sent out feedback requests to Donors. This revealed that just over 50 plants were sent out in response to requests from nine members, most of whom were also donors.

BOOKSALES ORGANISER – Frank Katzer

BPS booksales had a busy year, with one new book being sourced for sale to members. This was Sarah Whittingham's *Fern Fever, the Story of Pteridomania*. Yvonne Golding arranged for these to be sold at the Spring/AGM meeting, with the author present to sign them. Another major event was the sad death of Graham Ackers, who bequeathed his fern book collection to BPS booksales. These books were delivered to me in the last quarter of 2012 and all books have been catalogued since then. The BPS Committee will be deciding on how these books will be made available for sale to BPS members, which is likely to happen at the AGM in 2013.

I would like to take the opportunity to thank Yvonne Golding for all her help and support this year. Yvonne has taken books to many regional and committee meetings, making books available to many BPS members, more than I would have had contact with.

As usual, BPS booksales will always welcome bequests of books or offers to purchase either individual books or whole book collections. Please keep in mind that I can't offer internet prices, but then book shops would not offer sales values either when they purchase books. To contact me please use either my work e-mail: Frank.Katzer@moredun.ac.uk or the booksales e-mail: Booksales@eBPS.org.uk. Alternatively I can be contacted by post: Frank Katzer, Highfield House, Muirburn, Skirling, ML12 6HL, Scotland or by phone 0044 (0)1899-860307.

MERCHANDISE ORGANISERS – Bryan & Gill Smith

Merchandise sales were much higher in 2012 (over £1,200) than in 2011 (around £500), mainly for two reasons. Firstly, as anticipated, we produced the 2013 BPS calendar early in

the year to try and improve on sales, and it was ready for the 2012 AGM. This paid off, with more selling opportunities throughout the year. We plan to repeat the exercise by having the 2014 calendar similarly available – and hope that members will have been persuaded to submit their photos for inclusion. Secondly, we added a new item to the list – 'What's that fern?', a low cost, simple, waterproof, colour field guide to 19 British ferns. This has proved very popular, particularly with the public when BPS members sold it at OPAL's Big Nature Day at the NHM in May, at the BioBlitz in York in June, and at the RHS's one-day October events at Harlow Carr, Hyde Hall, Rosemoor and Wisley.

We had just under 20 mail orders (from the UK, Denmark, Germany and Hungary), which compared with around 20 mail orders (from the UK, USA, Denmark and Switzerland) in 2011. Face-to-face selling continued, and we sold merchandise at the NHM AGM, at national meetings in Wiltshire and Northumberland, and at the Autumn indoor meeting, also at the NHM. As usual, members had the option to save postage by pre-ordering items for meetings we attended. Colleagues in the north sold merchandise at the Southport show, at the York Museum 'Ferns and Fossils' weekend, and at the Yorkshire Regional Group's AGM. Further details can be found in the Merchandise section of the Treasurer's accounts.

The current merchandise list (May 2012), which was distributed with the Autumn mailing, boasts some 19 ranges and a total of nearly 60 individual products. The list continues to be available through the BPS website, and we send out new order forms when we fulfil orders.

HORTICULTURAL INFORMATION ADVISER – Matt Busby

2012 has been a far more interesting year, with queries from members in both the UK and abroad. I received photographs of a fern that required identification from a grower in Italy. By consulting with other notable members, we were able to decide its genus but lack of fertile material prevented a more definite identification. Other queries included the control of scale infection, where to obtain difficult to acquire species and the addresses of UK nurseries.

I am always pleased to help members with any cultural problems they may have with their fern collections and I am also happy to help with other plant groups.

ARCHIVIST – Matt Busby

The Society's archive remains at the University of Manchester Museum, Oxford Road, Manchester M13 9PL. Access is dependent on museum staff being available to accompany visitors to the archive. Members are advised to contact the Society Archivist for advice before visiting the museum. Please note the following:

- There is no access to the archive at weekends, and weekday lunch-times should be avoided.
- Arrangements for visiting the archive should be made by contacting Dr Rachel Webster: Rachel.E.Webster@manchester.ac.uk. The museum phone number is 0161-275-2648.
- Items for the archive should be sent to the Archivist, A.R. Busby, at his home address;.
- Items can only be loaned if prior permission has been received from the Archivist.
- Any items removed from the archive should be entered in the Archive Loans Book.
- A copy of the current archive catalogue can be obtained either by e-mail or post from A.R. Busby at 16 Kirby Corner Road, Canley, Coventry CV4 8GD (02476-715690).

We are always anxious to acquire photographs, documents, horticultural catalogues and press cuttings for the archive. Pre-1890 items are particularly valuable. Collection can be arranged for heavy or bulky items.

My thanks go to the Committee, and in particular to Yvonne Golding and the Manchester Museum staff for the valuable assistance given to me during the year.

CULTIVAR REGISTRATION SUBCOMMITTEE – Martin Rickard

The Subcommittee did not meet formally during the year but some progress has been made on a *Polypodium* register. Much still needs to be done and it is unlikely to appear in the next 12 months. The much smaller draft register of *Osmunda* should be ready sooner.

OBITUARIES

R. Graham Ackers

1941 – 2012

Graham was: teetotal, introduced the formative Rolling Stones to the Blues, knew all the right dances to the right music, suffered fools gladly. Well, one of these is true.

photo: P.J. Acock

Graham Ackers on SE meeting in Hertfordshire, June 2010

Graham was born in Blackpool on 3rd December 1941. Graham left the prestigious Arnold School in 1960 and moved to London. He took up a position at the Clerical and Medical Insurance Company, which was where he picked up his great love of foreign films. Early on in London, he formed a close friendship with Dave Williams, John Broven and the late Mike Leadbitter, who along with Graham's school friend Will Jones had a great love of blues and R&B music; Fats Domino and Jimmy Reed were Graham's favourite artists. In 1962 he drove the Rolling Stones' Mick Jagger, Keith Richards and Brian Jones in a hired van from London to Manchester for the first American Folk Blues Festival.

In the 1970s Graham joined the Aldershot Dolphins, an underwater diving club. He spent many of his holidays diving, especially loving visits to the Red Sea. Graham had inherited his father's interest in Botany and Zoology and typically while others hunted for their dinner he studied the smaller creatures and developed an interest in marine sponges, becoming an expert and naming a few new ones to science, some of which are preserved at The Natural History Museum. Graham had already developed a keen sense of the need for conservation and would take very little from the sea. However, when a fellow diver saw him surface with a particularly large lobster and asked him if he was going to return it to the sea, Graham replied in good humour "No! Not likely."

Just over 30 years ago Graham met his third wife Lesley through the Marine Conservation Society, and close friends said that this was the happiest period of his life. Lesley was the ideal partner for Graham, sharing his love of diving, the natural world and gardening.

Graham joined the BPS in 1989 and from the beginning was a regular at national and local group meetings. In 1993 Graham and Lesley organised a South-East meeting (*Bulletin* 4(4) p. 170) and we were invited to their delightful home, the Old Bakehouse, Abinger Bottom. It was then that Graham's extensive library, his marvellous collection of ferns and other plants and his love of travelling were revealed to us. Over the years Graham built up an outstanding collection of books on ferns and many other branches of natural history. Graham authored many well researched and varied *Pteridologist* articles, and won the J.W. Dyce Award for the best published BPS contribution in 2011.

In 1992 Graham was elected to the BPS committee and for the next twenty years he played a very active role in the Society. In 1996 I co-opted him on to the Meetings Subcommittee and at his first meeting Graham asked if we would like him to take minutes. This brought to our attention the critical, professional and efficient way that Graham went about all his business. He used his organisational skills very effectively in all the BPS offices he held: Committee member 1992-1995, 2000-2003, 2004-2006; Auditor 1996-2000; Plant Exchange Organiser 2002-2006; Committee Secretary 2006-2012.

Graham and Lesley had travelled extensively and he was soon cajoled into leading a trip to Madeira with Andrew Leonard. Following this success Graham organised a few other field meetings as well as many successful spring and autumn indoor meeting programmes, and he coordinated the organisation of the Society's international symposium in Guildford in 2001. Graham's biggest venture was to take the Society to the tropics. Contacting Yasmin Baksh-Comeau in the University of the West Indies, Graham set to work and planned this exotic tour to perfection. Graham was one of the stalwarts of the regular fern expeditions with the Hardy Fern Foundation to America and other places, and I was fortunate enough to share a room with him on a number of these tours. In Philadelphia we stayed in a posh hotel and the desk was cluttered with very fine stationery; to my amazement Graham just shovelled it into the bin so that he could settle down to his work. Graham mixed his studiousness and his love of collecting books with having great fun. He made many friends among our American colleagues and especially enjoyed the company of Sue Olsen, sharing their many experiences of growing ferns over a glass of wine or two on the long bus journeys or after dinner in the evenings.

Shortly after Lesley's funeral in November 2011, Graham asked Paul and I to put his ferns away for the winter. Having tea afterwards he said that he had no fear of death as he felt he had done everything that he had wanted to do. Roger Golding, Peter Clare, Paul Ripley and I were coming back from the New Forest in late spring and decided to call in and see Graham. He welcomed us all into his room in the hospice and was quite open about the fact that he probably only had a few weeks left. His nephew Alan had delivered his laptop so he could do a little work but he had not been able to start. He was bright and alert and enjoyed the banter but needed time to think through each of our questions before replying. It was as well we called in because he only said a few more words over the next couple of days and he died the following weekend on 19th May.

Two of the sad things for me are firstly that I keep thinking of all the things that Graham and I were still going to do together and secondly, Graham and Lesley's garden really was at the peak of its splendour. The previous year, while Lesley was quite ill, they resolved to improve certain features and characteristically succeeded; it was so sad to think that the new owners of the house might well not appreciate the wonder of it, and that so few of the people that would really have appreciated it ever saw it.

Pat Acock

Barbara Joe Hoshizaki

1928 – 2012

Barbara Joe Hoshizaki, born on 14th June 1928 in Oakland, California, died aged 83 on 30th May 2012 in Los Angeles.

Barbara attended public schools in Los Angeles and received her BS from the University of California, Los Angeles in 1951. There she met Mildred Mathias, a botany professor who became Barbara's mentor and encouraged her to study ferns. Her MS was awarded by UCLA in 1954. Barbara was Professor of biology and taught for 28 years at Los Angeles City College. She was also Curator of Ferns at the UCLA Herbarium.

Barbara travelled widely. Early in her career she spent three months in Costa Rica studying ferns with the Organization for Tropical Studies. She continually worked with and developed close relationships with her academic colleagues and also with amateur and professional growers around the world. She introduced many fern species into cultivation and wrote numerous scientific and popular papers on ferns. An avid taxonomist, she corrected scientific names of misidentified ferns through extensive research.

Barbara had been a BPS member since 1985. She was president of the American Fern Society, the Southern California Horticultural Institute, the Los Angeles International Fern Society and Vice-president of the Pacific Horticultural Foundation. She served on the boards of many horticultural and botanical organisations. She was an honorary member of the American Fern Society, the Los Angeles International Fern Society and the Tropical Fern and Exotic Plant Society, Inc.

She is well known for *The Fern Grower's Manual*, published in 1975. This seminal work established a bench mark for ferns in cultivation in the United States. A revised and expanded seconded edition with co-author Robbin Moran of the New York Botanical Garden was published in 2001.

Barbara was an academic who didn't confine her work to the herbarium – a gardener who actually grew the ferns she wrote about. Her garden, many years in the making, was her research library. This hands-on experience informed her work and made her an in-demand speaker for professional meetings and for amateur groups. It was a fabulous garden that was both a pleasure and a privilege to visit. Barbara was a good friend who shared her knowledge, expertise and plants from her garden. We shall miss her generosity and kindness.

She is survived by her husband, Takashi, two children, a grandson, a sister and brother, and numerous nieces and nephews.

Janet Keyes

IN MEMORIAM

We were also sorry to learn of the death of the following (date joined BPS in brackets):

Mr David Davies of Llanymddyfri (2001)

Mr Terry Peterson of Leamington Spa (1997)

Mrs Linda Pickering of York (1991)

Mr Ivor Price of Cardiff (1991), who supported the South Wales & Borders Regional Group.

Mrs Susan Margaret Jillian Sykes, 1939 – 2012

Sue Sykes, who died on 5th November 2012, was known to most of us as the wife of Robert, our immediate past President. As a very young couple, they began their married life in East Africa, where she demonstrated particularly her love of the great outdoors and all creatures great and small, a recurring theme for the rest of her life. On their return to this country, she raised a happy family in Kendal and, later, played an active part in the community as a truly compassionate social worker attached to the local hospital. After a move from town to country, they relished the village life of Crosthwaite, where she welcomed fern-lovers and music-lovers alike with warm hospitality.

At the end, the service of remembrance in St Mary's Church was made memorable by the lovingly poignant, spoken and musical contributions of her children and grandchildren.

Melville Thomson

Mrs Marie Winder, 1935 – 2012

Marie Winder, who died on 12th March 2012, was a founder member, with her husband Geoffrey, of the BPS East Anglia Group, having joined the Society in 1990. Though her earlier professional expertise lay in research into diseases of sugar beet, her horticultural interests included the raising of snowdrops, cyclamen and, of course, ferns, grown in association with uncommon trees and shrubs. Marie was a most hospitable hostess, and we are grateful to her for allowing us to use her home as a venue for our ever-popular October meetings. Above all we shall miss her uncanny knack of immediate recall of the most abstruse botanical names.

Barrie Stevenson

MEMBERSHIP LIST: ADDITIONS & AMENDMENTS

NEW MEMBERS

* *new members 2012,* ** *new members 2013,* # *members rejoined 2012*

* Airey, Mr R.L. & Mrs R. Ros., 24 Avondale Road, Carlton, Nottingham, Notts. NG4 1AF. rosairey@hotmail.co.uk

\# Baggott, Mr M.A., The Nutshell, Canon Frome, Ledbury, Herefordshire HR8 2TB. baggymagic@btopenworld.com

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* Bezsmertna, Dr O.O., O.V. Fomin Botanical Gardens, Taras Shevchenko Kyiv National University, Symona Petliyry Street, 1, Kylv 01032, Ukraine. olesya.bezsmertna@gmail.com

* Bradbury, Mr R.J. & Mrs J.A.E., Cragg Farm, Newland, Ulverston, Cumbria LA12 7SJ

* Bradbury, Mr J.F., 148 Nab Wood Drive, Shipley, West Yorks. BD18 4EW. jim.f.bradbury@gmail.com

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* Cavrini, Mrs E., Via Dugliolo 5/A, Budrio, BO 40054, Italy. info@gardenstudio.it

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** Clarke, Mr W., 16 Greenfield Road, Stonesfield, Witney, Oxon. OX29 8EQ

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BPS MEETINGS CODES

If you take part in a BPS meeting, you should first have read the BPS Safety Code and the Code of Conduct for the Conservation and Enjoyment of Wild Plants. To confirm that you have done so, you will need to have signed the Meeting Attendee's Declarations Form for the year in which the meeting takes place. This helps BPS to show that it is taking all reasonable care with your safety and is also taking a responsible attitude to conservation. The form is sent out annually in the autumn mailing along with the Meetings Programme, and copies of the signed forms are sent to the meeting leaders. The Safety Code was published in the 2000 *Bulletin* (Vol. 5 no. 5 p. 275) and the original Code of Conduct in the 1999 *Bulletin* (Vol. 5 no. 4 p. 199). The latter has been slightly updated and for convenience both documents are reproduced below. Both documents are also available on the BPS website, as is the full Code of Conduct published by the Botanical Society of the British Isles.

Bryan Smith
Meetings Secretary

CODE OF CONDUCT

FOR THE CONSERVATION AND ENJOYMENT OF WILD PLANTS

The above code was published by the Botanical Society of the British Isles. A copy is available at: http://www.nhm.ac.uk/hosted_sites/bps/Code%20of%20Conduct.htm. The main points relating to pteridophytes are outlined here. Members are urged to follow these guidelines. Although the information provided here relates only to the British Isles, similar legislation exists abroad. Members are urged to follow the same standards abroad as they do at home and always to act within local legislation.

Legal protection. All wild plants are protected by law in the United Kingdom. Under the Wildlife and Countryside Act 1981, it is illegal to uproot any plant without permission from the landowner or occupier. Similar protection is given to plants in Northern Ireland under the Wildlife (Northern Ireland) Order, 1985. Furthermore, many nature reserves, including National Trust land. have bylaws in force making it illegal to pick, uproot or remove plants. Several of our rarest plants are specifically protected under Schedule 8 of the Wildlife and Countryside Act against intentional picking, uprooting and destruction, unless damage is a result of a lawful activity and could not reasonably have been avoided.

The pteridophytes listed on Schedule 8 are *Cystopteris dickieana*, *Equisetum ramosissimum*, *Ophioglossum lusitanicum*, *Trichomanes speciosum* (including its gametophytic form), *Woodsia alpina* and *W. ilvensis*. In Northern Ireland *Gymnocarpium dryopteris*, *Lycopodiella inundata*, *Pilularia globulifera*, *Polystichum lonchitis* and *Trichomanes speciosum* are similarly protected. In the Republic of Ireland the following pteridophytes are specifically listed: *Asplenium obovatum*, *A. septentrionale*, *Cryptogramma crispa*, *Gymnocarpium robertianum*, *Pilularia globulifera* and *Trichomanes speciosum*.

Responsible conduct. Collecting small amounts of plant material for private study, research or as voucher specimens is usually acceptable, except in the case of protected or rare species. However, no collecting of any plant material should be undertaken on a nature reserve or protected site without first obtaining permission, and in no circumstances should the bulk of a population be collected.

Habitat conservation. Rare plants are often rare because they require specific conditions, and unintentional damage to their habitats can easily occur. A particular threat is soil compaction. Should you visit a rare plant then please avoid doing anything which will alter the site conditions, such as disturbing the surrounding vegetation for photographic purposes, or excessive trampling of surrounding vegetation.

Introducing plants to the wild. It is an offence to introduce certain plant species into the wild. However, none of the listed species are ferns. Nevertheless, non-native plants should never be introduced into the wild, and one fern, *Azolla*, is now becoming a pest on some nature reserves in SE England, so particular care should be taken if wellingtons etc. have been used previously where *Azolla* occurs.

BRITISH PTERIDOLOGICAL SOCIETY SAFETY CODE

In common with other scientific and natural history societies, the BPS has drawn up a safety code for its meetings, in particular field meetings. Every meeting leader will have a copy for consultation by participants but every participant should read the code and take the appropriate responsible action for each meeting he or she attends.

PARTICIPATION IN MEETINGS The BPS will, through the meeting leader, at the beginning of the meeting, draw the attention of participants to the points below. It is the duty of all participants to practise extreme care and common sense and not to take risks. The following points are particularly important in taking ultimate responsibility for your own safety:

1. Ensure that you are adequately clothed and equipped.
2. Never leave the main party without notifying the leader of your plans.
3. Pay particular attention to the hazards of the terrain and their potential danger, as a result of your actions, to others. For example, be careful not to dislodge loose stones and boulders.
4. Do not rock-climb without experience and the proper equipment.
5. Do not damage walls, fences, hedges, gates, etc.
6. Leave gates open/shut as the party finds them.
7. Take care not to start a fire.
8. Familiarise yourself with the procedure to adopt in the event of an accident in the field.

CLOTHING AND EQUIPMENT Always carry windproof and waterproof outer clothing and wear suitable footwear, e.g. walking boots or, in certain circumstances, wellingtons. All clothing should be suitable for the job (e.g. jeans not recommended) and for the worst potential weather. Carry sufficient food and drink for the excursion, with some extra in case of emergency. A first-aid kit is also advisable.

In mountains, the following are necessary:

1. Two warm, long-sleeved sweaters of wool or similar material.
2. Properly fitting walking or climbing boots with commando-type or Vibram soles, worn over suitable woollen socks. Footwear should be waterproof but wellingtons should not be worn.
3. A rucksack with spare sweater and (if not being worn) anorak/cagoule and over-trousers.
4. A whistle, compass, maps, torch, first-aid kit.
5. A survival bag if more than ½-hour from the nearest inhabited place.

At all outdoor meetings, it is worth considering carrying an emergency survival blanket. They can be obtained, for approximately £3, from retail outlets selling outdoor leisure clothing and equipment. They are very light (*c.*85 g) and occupy very little space.

PROCEDURE IN THE EVENT OF AN ACCIDENT IN THE FIELD First-aid must be rendered at once, and medical and relief help should be sought if necessary. Prevention of exposure is almost always possible through adequate clothing, equipment and procedure, but if a case is suspected the initial treatment is additional warm clothing and a windproof or waterproof outer garment, plus ingestion of a source of rapidly absorbed food, such as sugar or glucose in solid or liquid form, preferably hot liquid.

THE INTERNATIONAL DISTRESS CODE IN MOUNTAINS

Six long flashes/blasts/shouts/waves in succession, repeated at 1-minute intervals.

The following publication may also prove helpful: Jackson, J. *et al.* (reprinted 1982) *Safety in Mountains*. Obtainable from the British Mountaineering Council, Crawford House, Precinct Centre, Manchester University, Booth Street East, Manchester, M13 9RZ.

(Adapted from the Safety Code of the British Bryological Society)

www.eBPS/meetings/BPS_Safety_Code_A4.doc

MEETINGS PROGRAMME 2013

Meetings Secretary: B.D. Smith
Meetings Subcommittee: P.J. Acock, R.J. Cooke, R. Golding, N.J. Hards, J.M. Ide, P.H. Ripley, M.H. Rickard, F.J. Rumsey

Sat. 6 April	**AGM & Spring Indoor Meeting – Royal Botanic Garden Edinburgh** Leader: Mary Gibby
Sat. 8 - Sat. 15 June	**Week Field Meeting – Western Isles** Leader: Pat Acock
Tues. 9 - Sun. 14 July	***RHS Flower Show, Hampton Court: BPS Stand** Contacts: Yvonne Golding/Gill Smith
Sat. 27 - Sun. 28 July	**Weekend Field Meeting – Lincolnshire** Leader: Neil Timm
Thurs. 15 - Sun. 18 Aug.	***Southport Flower Show: BPS Stand** Contact: Michael Hayward
Fri. 27 - Sun. 29 Sept.	**Long Weekend Garden/Field Meeting – Cornwall** Leader: Martin Rickard
Sat. 9 Nov.	**Autumn Indoor Meeting – RHS Harlow Carr, Harrogate** Leader: Jennifer Ide

* *Event supported by, but not organised by, the BPS.*

For further details of these meetings please see the Meetings Programme sheets sent to members with the autumn mailing and also available on the BPS website. For general enquiries about meetings, contact the Meetings Secretary (Meetings@eBPS.org.uk).

Regional Meetings

These meetings are open to all members, so if you are visiting one of the following areas you would be very welcome to join in. For details of meetings please see the BPS website or contact the regional organisers by e-mail, or by post enclosing a stamped addressed envelope.

Cornwall	Matt Stribley, 8 St George's Road, Truro, Cornwall TR1 3JE Cornwall@eBPS.org.uk
East Anglia	Tim Pyner, 182 Southchurch Boulevard, Southend-on-Sea, Essex SS2 4UX; EastAnglia@eBPS.org.uk
Manchester & N. Midlands	Yvonne Golding, 7 Grange Road, Buxton, Derbyshire SK17 6NH ManchesterNorthMidlands@eBPS.org.uk
North-West England	Peter Campion, Lake View, Castle Hill, Bassenthwaite, Keswick, Cumbria CA12 4RG; NorthWest@eBPS.org.uk
Scotland	Frank McGavigan, 12 Glenbank Avenue, Lenzie, Glasgow G66 5AA Scotland@eBPS.org.uk
South-East England	Paul Ripley, 2 Station Villas, Station Road, Appledore, Ashford, Kent TN26 2DF; SouthEast@eBPS.org.uk
S. Wales & Borders	Brian Dockerill, 19 Westfield Road, Glyncoch, Pontypridd, Mid-Glam., CF37 3AG; SouthWalesBorders@eBPS.org.uk
Wessex	Jo Basil, 14 Royden Lane, Boldre, Hants. SO41 8PE & Mike Hill; Wessex@eBPS.org.uk
Yorkshire	Bruce Brown, 4 Bank Parade, Otley, West Yorks. LS21 3DY Yorkshire@eBPS.org.uk

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www.fernnursery.co.uk
Tel.: 01472 398092. Please send stamped addressed envelope for list

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